FCC RURAL HEALTH CARE PILOT PROGRAM PROPOSAL ARKANSAS TELEHEALTH NETWORK

(WC Docket No. 02-60)

ABSTRACT

In response to the FCC Rural Health Care Pilot Program, the State of Arkansas, in a historical feat, has allied its major healthcare service organizations and stakeholders, building the framework for a fully-connected, tactically-expanded, and efficiently-managed statewide telehealth system. This partnership of healthcare organizations is realized through the Arkansas Telehealth Oversight and Management (ATOM) Board, with a current membership of 16 organizations and an open invitation to all others interested in improving Arkansas' telehealth resources. This proposed effort is seeking FCC funding to 1) consolidate the state's existing telehealth networks, 2) strategically update and expand the statewide network to improve rural access, 3) provide connectivity to the Arkansas Department of Education's Interactive Video Network, 4) connect to Internet2 and Arkansas' dark fiber backbone, and 5) schedule and manage the 24/7 needs of the network.

ATOM is comprised of a diverse group of Arkansas healthcare organizations operating statewide, which includes the following agencies:

- University of Arkansas for Medical Sciences
- Arkansas Department of Health and Human Services
- Baptist Health
- Arkansas Center for Health Improvement
- Arkansas Department of Finance and Administration
- Arkansas Department of Information Systems
- Arkansas Foundation for Medical Care
- Arkansas Hospital Association
- Arkansas Office of Information Technology
- Arkansas Research & Education Optical Network
- Community Health Centers of Arkansas
- DaySpring Behavioral Health
- Delta Regional Authority
- Mental Health Council of Arkansas
- St. Vincent Health System
- Training, Research in Aging and Children Services (TRACS)
- And others as they choose to join.

As selected by the ATOM Board, the University of Arkansas for Medical Sciences serves as the legal and financial applicant seeking FCC funding. Through an innovative management plan and statewide collaboration and support, this pilot program will revolutionize the composition, interoperability, and management of Arkansas' telehealth efforts. A total request of \$5,054,988 and an accompanying hard cash match of \$837,300 will achieve goals of consolidation, expansion, and management of the Arkansas Telehealth Network.

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FCC RURAL HEALTH CARE PILOT PROGRAM PROPOSAL ARKANSAS TELEHEALTH NETWORK PROJECT NARRATIVE

Applicant / Project Introduction

Applicant Introduction

As strategically and collectively designated by the Arkansas Telehealth Oversight and Management (ATOM) Board, the **University of Arkansas for Medical Sciences (UAMS)** will be legally and financially responsible for the conduct of activities supported by the Federal Communications Commission Pilot Program.

In response to the Federal Communications Commission (FCC) Rural Health Care Pilot Program, the State of Arkansas, in a historical feat, allied all of its major healthcare service organizations and stakeholders to build the framework for a fully-connected, tactically-expanded, and efficiently-managed statewide telehealth system named the Arkansas Telehealth Network. This partnership of healthcare organizations is realized through the Arkansas Telehealth Oversight and Management (ATOM) Board, led by the University of Arkansas for Medical Sciences (UAMS) in alliance with Baptist Health (BH), the Arkansas Hospital Association (AHA), and the Department of Health and Human Services (DHHS). As the primary stakeholders in the proposed statewide telehealth initiative, these organizations in concert with Arkansas' public and private non-profit healthcare organizations have amassed the collective expertise to launch the proposed ATOM effort to create a comprehensive and inclusive telehealth solution for the entire state with an emphasis on the rural Arkansas Delta. Cooperatively, ATOM selected UAMS to be the legal entity through which this project would be proposed. Leveraging the leadership of all major health care facilities in the state, ATOM will achieve its mission to optimize telehealth services in Arkansas through statewide direction and partnership.

To fully appreciate the magnitude of this alliance, ATOM's diverse and expert composition is briefly highlighted. With a current membership of 16 organizations, ATOM is an alliance of Arkansas' healthcare organizations and stakeholders. As detailed in the *Management Plan* section of this narrative, decision-making and the oversight of daily operations is directed by the ATOM Operations Board composed of the DHHS, BH, UAMS, and two hospitals to be named by the Arkansas Hospital Association (AHA). This Board solicits the recommendations and advice of an ATOM Advisory Board, which represents the concerns and priorities of the general membership. Membership is open to any health or technology-related organization (governmental; private, non-profit; or for-profit entity).

As an introduction to ATOM's primary partnership organizations' myriad of efforts and skills, the following list briefly highlights organizational achievements in telehealth among UAMS, BH, and DHHS. For further explanation on these and other qualifications, please see the section, *Organizational Expertise*.







Pioneered Arkansas' first telehealth system in 1991.

Created an award-winning, cost-efficient Medicaid-funded obstetrical telehealth program.

Delivers telehealth consultation in genetics, oncology, neonatology, psychology, education, etc. First in Arkansas and region to implement an eICU providing remote monitoring of Critical Care patients (2005). Constructed a home health telehealth program for patient monitoring

Provides remote teleradiology and sleep study patient assessment and consultation to rural hospitals. Operates Arkansas' emergency preparedness telehealth system.

Supplies clinical and educational telehealth to providers and patients.

Launched a telehealth network serving rural health clinics, critical access hospitals, and the state's hospitals.

To complement these three primary stakeholders, ATOM shares a diversity of partners, all of which have experiences in Arkansas' healthcare. The names of all ATOM member organizations follow, with an extended explanation of their qualifications included in the *Organizational Expertise* section of this proposal.

- Arkansas Center for Health Improvement
- Arkansas Department of Finance and Administration
- Arkansas Department of Information Systems
- Arkansas Foundation for Medical Care
- Arkansas Hospital Association
- Arkansas Office of Information Technology
- Arkansas Research & Education Optical Network
- Community Health Centers of Arkansas
- DaySpring Behavioral Health
- Delta Regional Authority
- Mental Health Council of Arkansas
- St. Vincent Health System
- Training, Research in Aging and Children Services (TRACS)
- UAMS
- DHHS
- BH
- And others as they choose to join.

Leveraging the resources and support of these partnering organizations guarantees an open, inclusive, and durable framework to base the Arkansas Telehealth Network. These combined qualifications provide the established statewide relationships, past experience, related achievements, and the expert knowledge needed to achieve the proposed plan of work.

Project Introduction

The ATOM Board proposes several related efforts and resultant deliverables through this pilot program proposal, each aimed at aggregating the needs of the state's health care providers and

leveraging existing technology. These efforts are explained below.

- Effort 1: Consolidate Arkansas' existing public and private non-profit telehealth networks into one statewide Arkansas Telehealth Network.

 Deliverable: Cohesive statewide telehealth network.
- Effort 2: Expand the Arkansas Telehealth Network to strategically enhance access to rural, underserved areas and populations of Arkansas to include a special emphasis on the Delta region.
 - Deliverable: A more comprehensive statewide telehealth network.
- Effort 3: Unite the Arkansas Telehealth Network to Arkansas' Educational Video Network.

 Deliverable: Interoperability between the state's educational (520 endpoints) and telehealth resources (~270 endpoints).
- Effort 4: Connect the Arkansas Telehealth Network to Internet2 and Arkansas' fiber backbone.

 Deliverable: A fully connected statewide telehealth network with statewide access to the latest technologies and applications.
- Effort 5: Manage and schedule the 24/7 needs of the Arkansas Telehealth Network. Deliverable: A well-communicative network, with ease in scheduling and troubleshooting to encourage continued and frequent telehealth use.
- Effort 6: Evaluate the success of the proposed initiatives on a scheduled and continual basis.

 Deliverable: Evidence of the success of the pilot program for dissemination, publishing, and further replication of a model program.

By achieving these deliverables, ATOM can ensure Arkansas develops, maintains, and evaluates an interconnected statewide telehealth network that will connect public and private non-profit healthcare providers across Arkansas and link efforts with a national broadband network. Evaluation of the proposed work plan and outcomes will ensure lessons learned can be disseminated to the healthcare and technology communities in the endeavor to craft a model program to be replicated throughout the nation.

Goals and Objectives

Through this collaborative initiative, the following goals and accompanying objectives will be achieved during the course of the pilot program.

Goals

- **GOAL 1:** Consolidate Arkansas' separate broadband health networks to create a single, interoperable statewide Arkansas Telehealth Network compatible with a nationwide broadband health network.
- **GOAL 2: Expand** the Arkansas Telehealth Network to increase access to health care and health education, especially for providers and patients in medically underserved, rural, and Delta areas of the state.

- **GOAL 3:** Serve the Arkansas Telehealth Network through a centralized statewide scheduling and management system.
- **GOAL 4:** Connect the Arkansas Telehealth Network to the existing statewide K-12 school telecommunications network.

Objectives

Goal achievement will be measured by objectives that are described as time-based activities/events and quantifiable results. The pilot program objective measurements will be evaluated to inform the FCC as to the advisability of revising its current health care rules in a manner that will more effectively use available funding. Pilot program objectives are described in Table 1 below.

PILOT PROGRAM OBJECTIVES				
Type of Objective	Objective	Timeline	Goal(s) Supported	
Time-based	 Create a (1) statewide broadband health network design plan compatible with a national broadband health network, named the Arkansas Telehealth Network. 	Months 1-3	1-4	
Time-based	2. Merge Arkansas' three (3) separate, existing broadband health networks to create one fully-connected statewide broadband Arkansas Telehealth Network.	Months 4-9	1	
Time-based	3. Implement a centralized statewide scheduling and management system.	Months 4-9	1-3	
Time-based	4. Connect the Arkansas Telehealth Network to Internet2.	Months 6-9	1-4	
Time-based	 Invite private telehealth providers to connect to the Arkansas Telehealth Network on a payment-driven basis. 	Months 6-24	2	
Time-based	6. Connect Arkansas' existing K-12 school network to the Arkansas Telehealth Network.	Month 12	4	
Time-based	 Establish a fiber backbone for network infrastructure through the state's ARE_ON fiber program. 	Months 18- 24	1-4	
Quantitative	8. Provide at least 265 site connections over the first three years in underserved areas of Arkansas connected to the Arkansas Telehealth Network.	Months 6-24	1 & 3	
Quantitative	 Provide increased bandwidth for 100% of critical-access and at-risk hospitals in the state. 	Months 6-24	1 & 3	
Quantitative	10. Connect all (100%) identified and willing statewide Community Health Centers and	Months 6-24	1 & 3	

Community Mental Health Clinics to the	
Arkansas Telehealth Network.	

Table 1: Arkansas Telehealth Network objectives as proposed by Arkansas Telehealth Oversight and Management.

Identification of Need

Arkansas' Health Care Needs

Arkansas is in the state of *need*. Results from the United Health Foundation's 2006 survey of national health standings reveal Arkansas currently ranks in the *bottom five* states in the nation. Measuring a gamut of risk factors on personal behaviors, community environment, public and health policies, and health outcomes, Arkansas is 46th out of 50 states in overall health status. To complicate matters, Arkansas' status continues to hover in a declining pattern, having dropped from 45th placement in 1990. Among Arkansas' measured qualities, the following health outcomes contribute to this extremely poor ranking, while dually serving the purpose of highlighting Arkansas' need for improved medical services and interventions:

- Arkansas ranks 46th out of 50 states in **premature death**; years lost per 100,000 population: 9,587.
- Arkansas ranks 41st out of 50 states in **infant mortality**; deaths per 1,000 live births: 8.1.
- Arkansas ranks 44th out of 50 states in **cardiovascular death**; deaths per 100,000 population: 376.4.
- Arkansas ranks 44th out of 50 states in **obesity**; percent of population: 28%.
- Arkansas ranks 44th and 45th out of 50 states for **poor physical health days** and **poor mental health days** respectively; days in previous 30 days: 4.1 in poor physical health and 3.7 in poor mental health (*Unitedhealthfoundation.org*, 2006).

Another important observation from these findings, **health disparities** in Arkansas are rampant, as seen in the difference in the percentage of women who receive prenatal care varying from 69% among Hispanics to 84% among whites. In 2004, the Arkansas Minority Health Commission, a group dedicated to identifying and eradicating these disparities, conducted an extensive study of health care disparities in Arkansas. A review of their findings outlining the degree of health disparity comparing Blacks and Whites living in Arkansas are detailed below in Table 2:

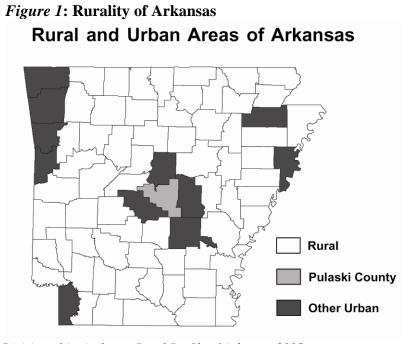
Table 2: Health Disparities in Arkansas.	Black / White Disparity
Infant mortality	+63%
Heart Disease	+25%
Ischemic Heart Disease	+21%
Colorectal Cancer	+46%
Breast Cancer	+43%
Cervical Cancer	+136%
Prostate Cancer	+143%

Stroke	+45%
Diabetes	+152%
Asthma	+194%
HIV/AIDS	+242%
Homicide	+490%
All Cause Mortality	+31%
Arkansas Racial & Ethnic Disparity Study, 2004	

Table 2. Arkansas Racial Health Disparity as documented by the Arkansas Minority Health Commission in 2004.

As clearly noted by the Arkansas Minority Health Commission, many adverse health outcomes among blacks and other minorities in Arkansas can be attributed in part to poverty, unemployment, lower educational attainment, lack of health insurance, and other socioeconomical factors. An overwhelming observation is that Arkansas' population of minorities is highly concentrated in certain areas of Arkansas: those that are rural, medically underserved, and suffer from the greatest rates of poverty. The University of Arkansas' Division of Agriculture explains in its 2005 Rural Profile of Arkansas 63 of Arkansas' 75 counties are considered non-metropolitan and consequently rural. As the report further highlights, the 2000 Census identified 48% of Arkansans as rural, compared to the nation, where only 21% were considered rural at the time of the 2000 census. To better exemplify these stark statistics, the following map of Arkansas represents which areas of Arkansas are considered urban or rural (Figure 1).

Figure 1: Rural counties are considered non-metropolitan, while urban counties are metropolitan areas. Pulaski County, home of Arkansas' capital, is separated for the purposes of classification, as its population size is more typical of major urban areas across the U.S. As seen in this map, 63 of Arkansas' total 75 counties are classified as rural.



University of Arkansas Division of Agriculture. Rural Profile of Arkansas 2005.

While much of Arkansas is rural, only four of the 42 counties in the Arkansas Delta are urban. Arkansas is also experiencing a boom in the state's Hispanic population, with the US Census Bureau reporting a 337% increase between the 1990 and 2000 Census. According to the Urban

Institute, Arkansas' Hispanic population grew 48% between 2000 and 2005, the fastest growth of any state in the nation. As home to significant, growing populations from Mexico, Central America, and the Marshall Islands, there is a need for language translation services. Providing this service by advanced video communications would greatly extend the ability to provide services in isolated, rural communities where interpreters are infrequently available.

The Delta counties and communities are by and large rural and home to the majority of Arkansas' Black population. The map provided below (Figure 2) separates Delta counties, showing the percentage and distribution of Blacks living in these impoverished areas.

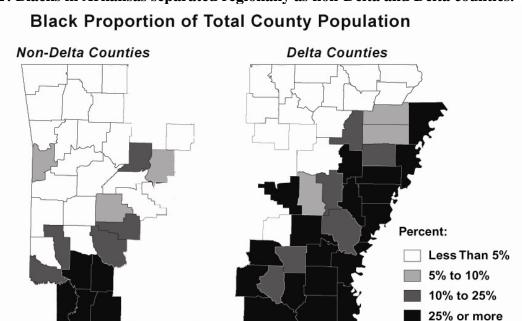


Figure 2: Blacks in Arkansas separated regionally as non-Delta and Delta counties.

Figure 2: The Arkansas Delta is home to many black families adversely affected by health disparity and other socio-economical problems. Data represents Black population percentages from 2003 and Delta counties designated 2007.

University of Arkansas Division of Agriculture. Rural Profile of Arkansas 2005 and The Delta Regional Authority, 2007.

For the purposes of this plan, the Delta refers to the 42 Arkansas counties included in the eight-state, 420-county-area defined by the federal government. The Delta Regional Authority, a federal-state partnership, represents, "the most distressed area of the country" (DRA, 2006). Six of Arkansas' 75 counties are classified as "non-white majority" by the Rural Policy Research Institute. This classification reveals that these counties comprise less than 50% of Whites; all of these counties lie in the Arkansas Delta (Rupi.org, 2006). Beyond racial makeup, the Arkansas Delta shares these common characteristics:

- Fourteen (14) counties in which more than 25% of residents aged 25-64 have neither a high school diploma nor GED
- Fifteen (15) counties with 20% or higher of the population living in poverty,

- Twenty-one (21) counties with 15% to 19.9% of the population living in poverty,
- Six (6) counties with 10% to 14.9% of the population living in poverty,
- The poorest county in the state, Lee County, where 29.1% of the total population is living in poverty
- Widespread unemployment eight counties have unemployment rates of 7 to 9.9% and one county where unemployment exceeds 10%
- Prevalent shortages of health care resources, where approximately 95% of the Delta is defined as medically underserved by HRSA.

To further illustrate Arkansas' statewide health care needs, the following maps depict Arkansas' medically underserved areas that canvas the state (Figure 3) and Health Professional Shortage Areas in Primary Care that affect the entire state (Figure 4). Finally, Figure 5 depicts the Mental Health Professional Shortage in Arkansas, a shortage affecting nearly every county in the state.

Figure 3: MUAs in Arkansas

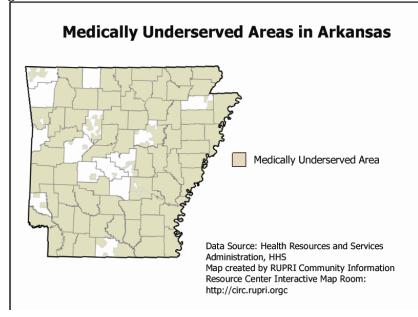
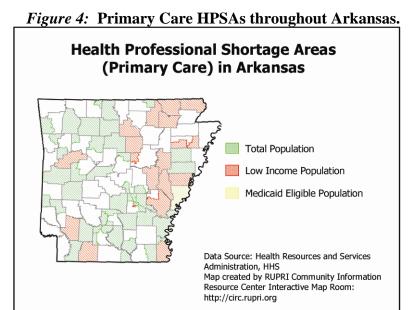


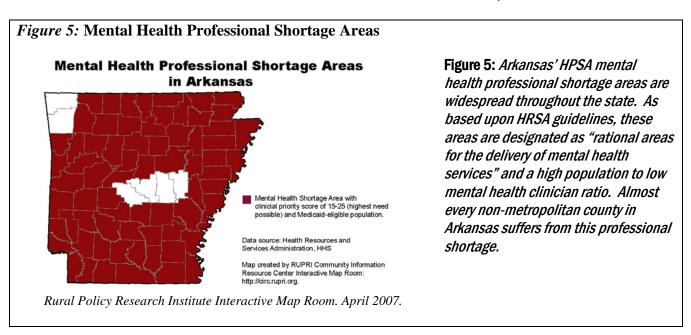
Figure 3: Arkansas is largely saturated in Medically Underserved Areas, based on an index of four variables: ratio of primary care physicians per 1,000 population, the infant mortality rate, percent of the population with incomes below the poverty level, and percent of population age 65 and over (Health Resources and Services Administration, HHS and RUPRI.)

Rural Policy Research Institute. Demographic and Economic Profile: Arkansas. July 2006.

Figure 4: Largely medically underserved, many areas of Arkansas are also considered Primary Care Health Professional Shortage Areas, which the Health Resources Services Administration defines as areas that "may have shortages of primary medical, dental, or mental health care providers." Arkansas has HPSAs that qualify upon the county's total population, low income population, and Medicaid-eligible population.



Rural Policy Research Institute. Demographic and Economic Profile: Arkansas. July 2006.



Few comprehensive needs assessments have been conducted in Arkansas to best determine the target population's barriers to care; however, some agencies have conducted needs assessments that can be drawn upon for a view of the Delta's needs. In accordance with a recent study, the University of Arkansas for Medical Sciences (UAMS) conducted preparative and grant-funded needs assessments of select counties in the Arkansas Delta. To arrive at these findings, UAMS surveyed patients, their providers, local health care unit administrators, domestic abuse shelter administrators, and a range of other healthcare professionals, including an extensive sampling of

health care consumers. The population and its providers have explained barriers to care, accessibility issues, and disparities in their own words. From these needs assessment interviews conducted in the past two years, UAMS has confirmed these over-arching and recurrent complaints among Arkansas' rural population:

- Transportation. Living in rural, medically underserved areas of the state, many patients need the support of a specialty or subspecialty physician miles and oftentimes hundreds of miles away from their hometown. Facing poverty and rural living conditions, transportation is overwhelmingly reported as a barrier to care. Many patients did not have their own transportation or a reliable source of transportation. Others reported that should they have transportation to a needed medical appointment, they do not have the child care resources available to watch over their children while they are a distance away from their home. Due to this barrier, many consumers living in rural areas of the state fail to follow-up on essential medical direction, advice, and appointments, thus contributing to Arkansas' poor health standing.
- Medicaid or Medicare, much less see the uninsured. As such, securing easy access to a healthcare home can be difficult for rural residents, especially one with access to subspecialty care. This access barrier is largely attributed to Arkansas' medical shortage and also owing to the fact that preventive care and after-hours consultation is often unavailable in rural areas of the state. To support these findings, the National Association of Community Health Centers issued *Access Denied: a Look at America's Medically Disenfranchised* in 2007. This publication claims one in five Arkansas residents are considered medically disenfranchised, defined as those "with no or inadequate access to a primary care physicians due to a local shortage of such physicians." This report assesses that 50.2% of Arkansas' adult population are uninsured without a usual source of care, which can allow the deduction that many Arkansans lack a healthcare home.
- Loss of Hospital Resources: Without access to specialists, hospitals close and are unlikely to ever reopen. Three Arkansas hospitals have closed within the last four years. Video support of emergency room and specialty consultation may help prevent further closures. Without rural hospitals, the lifeblood of rural communities, population, business, and industry move away, and the community dies.

As explained in the above description of Arkansas' health care needs, ATOM's target population suffers from a myriad of health care problems, accessibility issues, and disparities among minorities and rural areas of the state. In response to these needs, Arkansas has looked toward telehealth as a unique tool to overcome barriers in accessibility to quality specialty and subspecialty care. Telehealth became a continually growing health care initiative in 1991, when the UAMS Rural Hospital Program was founded as a telecommunications outreach program with a mission to share UAMS' and the University Hospital's resources with rural hospitals to add strength to their services. Telehealth has reached remote, rural corners of the state where specialty and subspecialty care were once unavailable. Still, many services are needed in the state's rural areas that are currently only available in the capital city of Little Rock. These services could be provided via an enhanced telehealth network; however, the costs are beyond

the rural health care providers' ability to pay. This initiative will address these issues through its proposed plan of work.

Arkansas' Telehealth Needs

Arkansas must expand and improve its telehealth resources to better serve its rural population. Concerns related to building and expanding the existing network encompasses problems in affordability of telehealth connectivity. Under current FCC Rural Health Care Program, rural health care providers receive a discount based on the difference between the cost of services in rural and urban locations. This approach, while effective in some states, does not adequately serve a state where the major telecommunications carrier has postalized rates. For instance, if the health care provider is located in AT&T's service area, the cost of service is the same as if the health care provider were located in an urban location. On the face, this appears to accomplish the FCC's goals for the Rural Health Care Program; the deployment of advanced telecommunications in rural areas. However, this is not the case because costs are excessive for rural health care providers.

Over the past several years, many rural health care providers have disconnected telecommunications services due to cost. In many instances the rural health discount has been no more than \$75 per month. This minimal discount has made applying for funds under the existing program intangible for rural locations that are short on staff. Even though Arkansas is centralizing the application process, the overall funding received is minimal.

Regarding the current telehealth networks, several issues exist to prompt the need to enhance network interoperability. Presently, Arkansas is home to three statewide telehealth networks: DHHS, UAMS, and Baptist Health, among a number of smaller, private networks. These three telehealth networks represent all areas of the state, serving consumers on a variety of levels including emergency preparedness (earthquake, pandemic flu, chemical spill, etc.), high-risk pregnancy consultation, diabetes self-management, health care education, home health, cardiology, psychiatry, and a number of other diverse medical applications. The networks also serve to educate providers across Arkansas, with health care meetings, continuing education opportunities, and other collaborative uses of teleconferencing. The co-existing networks have served many patients throughout Arkansas, yet these networks all function separately from one another, serving the same target population with needed services. The current telehealth network's greatest flaws are their **inability to easily communicate with one another** and **lack of a centralized, scheduling and management system**. Through this initiative, ATOM will seek to overcome these flaws.

The proposed statewide telehealth network will be created through three methods: 1) **Consolidation** of sites that currently exist on separate networks, 2) **Update and Addition** of sites in need of increased bandwidth and improved accessibility, and 3) **Expansion** of the network to include access to Internet2 and the Arkansas Interactive Video Network.

Arkansas' current telehealth networks are largely concentrated in prominent cities and towns in Arkansas, while some sites serve areas with only one easily-accessible telehealth site. Further, there are sections of Arkansas without easy access to telehealth specialty and subspecialty

support. Of those, the Arkansas Delta is among the most rural areas of the United States largely lacking telehealth services. The map included in Appendix A: $Maps - Exhibit\ I$ depicts the current, scattered distribution of the three telehealth networks that serve the target population, yet cannot easily communicate with the others. DHHS operates two separate networks: DHHS Hospital and DHHS Clinic Networks, each of which function as parallel networks that cannot easily communicate with each other. UAMS and Baptist Health also operate on separate networks, accounting for the state's scattered resources.

As proposed through this initiative, a comprehensive, interconnected telehealth network can be achieved through the consolidation of the existing networks, thus creating the Arkansas Telehealth Network. Through network consolidation, the target population can have ready access to improved, expanded services, while hospitals and health care facilities can easily communicate on matters ranging from a sore throat to a bioterrorist event. Further, these networks will be managed and scheduled using a centralized service, allowing for single-point-of-contact service, regulation and control of telehealth resources, and a pooling of technological resources. The sites depicted in Appendix A: *Maps - Exhibit 1* details the sites that will be consolidated to create the Arkansas Telehealth Network, thus providing ease in communication and centralized management and scheduling.

Once consolidation is achieved, ATOM will expand the Arkansas Telehealth Network to update existing sites with improved bandwidth, while also adding new sites to reach areas of the Delta and rural Arkansas without ready access to telehealth resources, as illustrated in Appendix A: Maps – Exhibit 2. Through this step, the Arkansas Telehealth Network will expand to include new DHHS Local Health Unit sites currently without video capabilities, while simultaneously adding bandwidth to all sites in need of improved data capacity. The DHHS Clinic network links all county health units in the state. The DHHS Hospital network links 82 acute care hospitals in the state. This phase will also enable improved health communications for the 55 Community Health Centers (CHC) located in Medically Underserved Areas. Connection of the CHCs to the Arkansas Telehealth Network will assist the development of electronic health records for patients in rural areas. Expansion of the consolidated network will ensure all areas of the state share easy accessibility to the same telehealth resources. To achieve this task, new telehealth sites will be added to existing DHHS Local Health Units that do not have interactive video capabilities. These sites have been selected based upon the lack of resources in the rural communities they serve; expansion will ensure this population gains access to needed medical expertise. New sites will be located primarily in rural Arkansas; however, some sites, especially those that offer subspecialty support in telehealth, are located in urban areas of the state. Site names, addresses, zip codes, RUCA codes, and phone numbers of existing and expanded network sites are detailed in Appendix B: Network Site Details. With 174 existing network sites and another anticipated 115 added network sites, Arkansas' statewide telehealth network will blanket all areas, both rural and urban. This element of ATOM's initiative will increase health care access in rural Arkansas, with a large concentration on bringing resources to the Arkansas Delta.

Finally, ATOM will connect the Arkansas Telehealth Network to the ARE_ON dark fiber backbone to offer statewide member access to Internet2, with the possibility of future access to the National LambdaRail. This stage will also allow connectivity with the existing Arkansas Interactive Video Network (VNet), with existing teleconferencing abilities at nearly every public

school district in Arkansas. This essential step lays the foundation for improved communication and connectivity in the state, with the potential of delivering school-based healthcare solutions through collaboration between the Arkansas Telehealth Network and the VNet. The Arkansas Telehealth Network will also connect to Internet2 through the University of Arkansas for Medical Sciences, which has a current connection. This will expand the capacities of all consolidated and expanded network sites. Finally, the Arkansas Telehealth Network will connect into the state's fiber backbone, allowing each network site improved data capacities, speed, and ease in communication. Data capacity and speed will also be enhanced by installation of higher bandwidth at select sites throughout the network. This progressive step offers a unique opportunity to the state: Access to the most advanced communication technologies available and collaboration with Arkansas' schools, where the possibilities for health care education and support are limitless. This essential development is depicted in Appendix A: *Maps – Exhibit 3*.

Description of Network & Design

Network Costs and Match Sources

ATOM estimates \$5,054,988 in total pilot program costs to achieve the described work plan, \$2,396,230 in year one and \$2,658,758 in year two. Eighty-five percent (85%) of the costs request the support of FCC Rural Health Care Pilot Program Funding, while ATOM will financially contribute at least 15% toward the total budget. This financial backing and anticipated revenue is described in below.

The proposed Arkansas Telehealth Network will connect to Arkansas Research and Education Optical Network's (ARE_ON) dark fiber network, thus providing statewide ATOM members access to Internet2 with the future possible availability of connection to the National LambdaRail. This dark fiber network is in the process of being planned and installed between the four corners of the state. In the next year, ARE_ON will light 1,198 miles of dark fiber in Arkansas, at a cost of \$6.4 million, funded through Arkansas General Improvement money specifically dedicated to build the statewide fiber optic network backbone, while simultaneously connecting the University of Arkansas at Fayetteville to this backbone. From this \$6.4 million, ATOM has analyzed which items are eligible for the FCC Rural Health Care Pilot Program match, determining \$800,000 can be used as a match. In addition, the UAMS Center for Distance Health (CDH) is contributing \$37,300 from its budget to be used as a match source. UAMS is contributing these costs toward the required FCC Rural Health Care Pilot Program 15% match. This estimated match includes the cost of allowable expenses as determined by the FCC. This cost share commitment exceeds the minimum match for this \$5,054,988 request. This match is documented through the provided UAMS Vice-Chancellor's and CDH Director's letters of match commitment, provided in Appendix D: Letters of Support. Items to be purchased through the cost share are itemized and justified in Appendix C: Budget and Justification. As a review of the committed match, the bullets below detail the match sources and amounts.

■ *University of Arkansas for Medical Sciences* – Vice-Chancellor Tom Butler commits \$800,000 of cost share using Arkansas General Improvement bond funding.

■ *University of Arkansas for Medical Sciences* – Center for Distance Health (CDH) Director Dr. Curtis Lowery commits \$37,300 of cost share using CDH funding.

Total match committed: \$837,300

To support the UAMS bond and CDH match sources, several ATOM members have pledged to contribute the following associated resources toward this project. While UAMS recognizes the matching requirements of the initiative only include "hard" or cash resources, donated resources are described in this section to further elaborate ATOM's commitment to make this proposed plan of work possible. These items are essential to the success of the program but are not covered by FCC Rural Health Care Pilot Program grant funding; therefore, ATOM members have pledged to donate these resources. A brief explanation of these items is included below, which demonstrates the commitment of the ATOM Board. These in-kind resources are *not* calculated in the specified match amount contributed.

- Call Center Manager: Manager to oversee the scheduling, maintenance, and support of the Arkansas Telehealth Network, as operated through a call center.
- Call Center Staff: Staff will be needed to operate the scheduling, maintenance, and support call center. Year 1 will require three call center personnel; year 2 will need six personnel; and by year 3, an estimated eight personnel will be needed to deliver this support function.
- *Travel*: In-state travel and related expenses will be required to establish and maintain sites within the Arkansas Telehealth Network. Over 6,000 miles a year should support the needs of the Network.
- Scheduling Software and Servers: All years of implementation will require scheduling software and servers, with year 1 used as the purchasing and launch phase of scheduling. Subsequent years will maintain this software and hardware to support the needs of the Arkansas Telehealth Network.
- Cisco 3560 LAN Switches and Maintenance: These switches will be needed to support the interoperability and connection of the Network, with ongoing maintenance to support their continued operation.
- LAN Wiring: End-site LAN wiring will be achieved contractually and is required for the installation of these switches.
- End-user Telemedicine Systems: Associated end-user equipment will be needed to establish new sites and encourage growing use of the network in any number of applications.

- Video System Maintenance: All of the Arkansas Telehealth Network systems must be maintained to ensure ongoing operation; therefore, vendor maintenance costs will be maintained for continued vendor-based support of the Network.
- Helpdesk Software, Server, and Associated Maintenance: Helpdesk software will be used to support the diverse and on-the-spot needs of telehealth providers. This software and servers will be maintained to ensure the latest updates and resources are available to all ATOM members and Arkansas Telehealth Network site locations.

Although these items are not eligible for grant or match funding under the FCC Rural Health Care Pilot Program, they are needed to successfully implement this ambitious telehealth pilot program. As such, the responsibility of these items will be assumed by the ATOM Board.

Specifically, certain ATOM members have already pledged to commit personnel and management resources related to implementing this pilot program. Of these, the following organizations plan to contribute the following services.

- University of Arkansas for Medical Sciences (*Proposal Applicant & ATOM Operations Member*)
 - Staff, Management, and Equipment Contributed: Administrative and professional support ensuring all proposed pilot program efforts are effectively implemented; a percentage of Dr. Curtis Lowery's salary; skilled nursing staff and technologists operating a 24/7 scheduling and management service; subspecialty medical support consulting through telehealth; equipment purchases among ATOM members will be pooled to secure discounted bulk equipment rates from UAMS' Tandberg and Polycom supplier.
- Baptist Health (*ATOM Operations Member*)
 - Staff, Management, and Consultation Contributed: Administrative, consulting and advanced technical resources for network design, implementation, and on-going support, if needed. Clinical expertise in telemedicine applications and services.
- Arkansas Department of Information Systems (ATOM Member)
 - Staff and management: Intermediary administrative and professional support interacting with the Governor's Office to ensure appropriations, bill proposals, and legislative adoption of network sustainability.
- Community Health Centers of Arkansas (ATOM Member)

- *Staff and management*: Telehealth equipment supplied through the UAMS Department of Psychiatry at six of the 55 Community Health Centers, 12 have Internet capabilities.
- Arkansas Department of Health & Human Services (ATOM Operations Member)
 - Network Capacity: Accessibility to the Department of Health & Human Services' two health networks that will be linked with the Arkansas Telehealth Network.
- All ATOM Members
 - Management: All ATOM Members will select representative personnel to attend ATOM Board meetings to contribute to the Board's management and the successful deployment and evaluation of the Arkansas Telehealth Network. Each of the 16 members will contribute at least one representative to these efforts.

ATOM's membership is in full support of the proposed project and each are dedicated to the success of the pilot program, as documented in provided letters of supported displayed in Appendix D: *Letters of Support*. Should further needs for resources arise, the ATOM Board will collectively address these needs through their available resources. To help support the dark fiber match, anticipated revenues are expected from for-profit participating organizations, described in further detail below.

For-Profit Payment Plans

For-profit entities will be encouraged to participate in the Arkansas Telehealth Network. To generate revenue, ATOM has enacted a policy to require appropriate payment for network usage and services among for-profit entities.

Interested for-profit organizations will join the ATOM Board, gaining voting privileges and the stakeholder benefit of unlimited network usage. Charges for for-profit participation follow:

- Installation
- Equipment
- Line costs
- Other connection expenses

These charges will be billed monthly, and three months of non-payment will result in termination of services and loss of ATOM voting powers. These terms will be communicated upon entry into the ATOM Board through signed, written agreements with for-profit members.

Organizational Expertise

ATOM Member Expertise

The partnering agencies comprising ATOM share a wealth of telemedicine development and management experience. The proposed effort is the consensus of the best Arkansas has to offer in telehealth knowledge and experience. UAMS, the legally and financially responsible applicant as identified through the ATOM Board, has extensive experience with telehealth and grants management. The background expertise of UAMS and each ATOM entity is described in detail below. Moreover, as a demonstration of their impact on patients, UAMS and Baptist Health contributed personal, telehealth success stories, included below.

Telehealth Expertise: UAMS

The University of Arkansas for Medical Sciences has years of experience in developing and managing telemedicine programs. Technical and organizational ability to implement this pilot program is evidenced by the fact that the UAMS Statewide Telehealth Network has grown to include more than 50 self-sustaining sites. As an overview of UAMS' programmatic achievements in telemedicine, UAMS' Rural Hospital and Antenatal & Neonatal Guidelines, Education and Learning System (ANGELS) programs are explained. These two programs led the University's and consequently the state's efforts in telehealth. Further, leaders from both organizations will continue to play instrumental roles in this pilot program effort through ATOM.

The UAMS *Rural Hospital Program* (RHP) led the state's efforts in telehealth when it established in 1991 with two sites, having grown to include 50 rural hospital, Area Health Education Center (AHEC), and clinic sites across the state. The primary aim of the network is to share UAMS resources to increase timely access to specialty services and information in rural settings that would not otherwise be available. The program has extended telehealth services into some of the most rural and needy regions of Arkansas. With over 15 years of experience creating telemedicine sites, training facilitators, and developing compressed video programs and presentations, the RHP has worked with numerous communities and a variety of facilities throughout Arkansas to develop the statewide network. In 2006, RHP held 272 different continuing education programs over telemedicine, serving 5,820 attending healthcare professionals. Further, RHP offered 34 different consumer education programs broadcasted through telemedicine in 2006, with 614 consumers in attendance.

The *ANGELS* program is an innovative Medicaid-funded, telehealth consultation and education service established in 2003 for a wide range of physicians including family practitioners, obstetricians, neonatologists, and pediatricians in Arkansas. Utilizing interactive compressed video and Level II ultrasonography, telemedicine conferences enable physicians to confer with Maternal-Fetal Medicine specialists regarding high-risk pregnant patients. Clinical telemedicine consultations allow patients, local physicians, and UAMS physicians to consult and review ultrasonography results in real time, bringing the state's only certified Maternal-Fetal Medicine subspecialty support directly to hometowns. In support of its telemedicine services, ANGELS established a call center to direct 24/7 support to patients and providers needing evidence-based triage and guidance. In 2006, ANGELS performed 891 consultations through ANGELS telemedicine, a marked increase from its pre-implementation rate of 174 consultations in 2002.

The single most important achievement of ANGELS to date is its success in expanding access to Maternal-Fetal Medicine specialists through telemedicine for women with high-risk pregnancies and their community physicians and the impact demonstrated by this achievement. ANGELS has accomplished this expanded access through two related processes: (1) raising physician awareness about when to seek consultation from an MFM specialist based on evidence-based referral guidelines; and (2) reducing geographic and temporal barriers to MFM specialists through the use of telehealth technologies and a regional transport system for high-risk deliveries. Since its implementation in 2002, ANGELS has increased the number of high-risk women transported to a regional tertiary medical center for delivery by 20% percent. These expansions in access have been largest in outlying rural areas of the state where residents historically have faced the greatest barriers to specialized obstetrical care. As a result of the ANGELS program, Medicaid beneficiaries who have premature or low birth weight infants are now 42 percent more likely to deliver these infants in a regional tertiary medical center than they were prior to ANGELS implementation in 2002.

In 2005, the Agency for Healthcare Research and Quality (AHRQ) chose ANGELS as a model program to be replicated in other states through its Medicaid Core Management Learning Network. This honor was based upon ANGELS' ability to decrease disparity, save state money, and increase quality of care through innovative technology. After a nationwide search, only five programs were recognized to show promise for their mission and ability to be replicated, ANGELS included. The ANGELS program will be used as a model for other state Medicaid programs to translate programmatic structure and techniques into their current systems.

UAMS has been recognized for its innovation and expertise in telemedicine repeated times. For over 20 years now, UAMS has successfully managed and implemented millions of dollars in telehealth-based grants and contracts. The University also employs some of the most sought-after speakers and innovators in telemedicine. In 2007, The ANGELS program was honored by the Harvard University Ash Institute through its *Innovation in American Government* program, placing ANGELS in the top 2% of nationwide applicants. Nearly 1,000 applications were submitted from across the country. The field was narrowed to the Top 50 Programs, and then to the Top 18, where ANGELS is currently ranked. ANGELS was selected for its novelty and exceptional efforts, effectiveness in addressing significant problems and potential for replication by other government entities. This award recognizes innovative governmental collaborations that transcend traditional practices.

One of UAMS' most documented telehealth advances is ANGEL Eye, a one-way, real-time video feed from the neonate's bed in the UAMS Neonatal Intensive Care Unit (NICU) to a website only accessible to family and selected hospital staff. ANGEL Eye is the only NICU webcam in the nation that provides live video feed of hospitalized neonates. A recently published account of this new technology explained the interaction between a sick mother and child. ANGELS was aware of the special needs of Jane Doe of Paragould before she entered UAMS Medical Center March 4 to deliver her child. Diagnosed with acute lymphocytic leukemia, a type of cancer that starts from white blood cells in the bone marrow called lymphocytes, Doe was told that she would have to undergo a cesarean section before she could initiate chemotherapy treatments.

The baby was delivered 10 weeks early, and was immediately admitted to UAMS' NICU. Doe was admitted to UAMS' intensive care unit after her delivery. Because of her compromised immune system, she was unable to see her newborn son. ANGELS came to her aid, providing her with a laptop computer that would allow her to see her child via the ANGEL Eye Web cameras. Attached to movable IV poles and stationed at individual beds and warmers, the cameras can be accessed by parents once they are given a password that allows them to log on the ANGELS website. The ANGEL Eye cameras, 14 in all, allow parents to zoom in and take snapshots of their infant and e-mail them to friends and family. This technology is currently being researched to determine the affect of maternal bonding and lactation among mothers remotely viewing their babies.

Doe left the hospital March 9 and returned March 19 to begin chemotherapy, and her family is grateful for the attention she and her child received from the ANGELS staff during their time in the hospital. Doe hopes to take her son home when she completes her current round of treatment.

Telehealth Expertise: Baptist Health

Baptist Health, the state's largest private, not-for-profit healthcare system, has over 120 points of access within Arkansas. Baptist Health employs approximately 7,000 employees, has 995 active physicians on staff, and 1,181 patient beds. Two of the five hospitals within Baptist Health are rural Critical Access facilities. There are 20 therapy centers and 61 clinics, with many located outside the metropolitan area providing better access to medical care to rural communities. Baptist provides support to four senior services facilities, 14 wellness centers/clinics, and currently has 31 Community Health Center affiliates located around the state. Baptist Health owns and operates one of the largest private hospital diploma schools for nursing (LPN and RN), as well as other allied health professional accredited professional schools.

Baptist Health has been successful in designing, implementing, and managing a wide area network that supports the delivery of patient care between the entities within the system. This robust broadband network is used for voice, data, imaging, and video and receives technical support through a Baptist Health staff of experts in networking/engineering, systems, and integration on a 24/7 basis. The staff is also skilled in wireless systems supporting clinical and business applications.

Baptist Health successfully implemented the first eICU (remote electronic monitoring and additional clinical support for critical care patients) in Arkansas and the region in 2005. Patient assessment and consultation is offered via the video network for sleep study patients in its rural facilities. PACS (Picture Archive Communications System) was installed in 2006, providing teleradiology. Emergency room physician telehealth is available through the Baptist Home Health Services for patient daily monitoring. Baptist Health's patient census for home health averages over 700 patients per day. Lifeline service is provided to 1,340 homes throughout Arkansas, allowing the elderly or afflicted to remain independent longer.

Baptist Health has been awarded and recognized a number of times for its excellence and innovation. The most recent of these awards are provided below:

- J.D Power Hospital of Distinction 2006
- National Freedom Award 2006
- Press Ganey Summit Award 2006
- Hospital Consumer of Choice from NRC 1996 -2006
- Best of the Best Hospitals in Arkansas (Arkansas Democrat Gazette)
- Governor's Family Friendly Employer Last five years
- Most Wired 2000, 2001, 2003, and 2004

To highlight the humanistic side of telehealth, Baptist Health contributed the following telehealth success story:

Baptist Home Health Network provides telehealth services for their patients, which are used as part of a comprehensive coordinated plan of care. Telehealth monitors placed in patients' residence transmits important health information via the patient's home telephone line to a secure web site and is viewed by home health registered nurse specialists. Jane Doe, a current patient of Baptist Health, is a 30 year old pregnant patient referred to the hospitals High-risk Obstetrics Telehealth Program due to a diagnosis of *hyperemesis*, which started in her ninth week of pregnancy. Hyperemesis is a condition where the patient experiences severe nausea and vomiting which results in low blood pressure, dehydration and potential harm to the fetus. Normally a pregnant patient with this problem would be admitted to the hospital, often many times during the course of pregnancy, to receive IV fluids for hydration and nutrition. The condition usually requires frequent trips to the physician's office in between hospitalizations for medical status assessment. These trips can be a difficult task if the patient lives far from health care providers and is feeling fatigued and ill.

Baptist Health Home Health nurses, experienced OB nurses, began caring for Jane as soon as the referral was received. Jane, a single mom living in a rural area of the state far from her physician's office in Little Rock, clearly needed individualized support to keep her out of the hospital during her difficult pregnancy. Baptist Home Health nurses did just that: They developed a telehealth plan of care in conjunction with her physician that included their provision of home-based IV fluid administration, and close daily monitoring using a telehealth monitor. The nurses make home visits at least weekly to assess the patient and deliver the IV therapy. In addition – the patient sends her blood pressure, weight, information about any symptoms she is having, and fetal kick counts – a measure of how active and healthy the fetus isdaily for review by her nurses. Low blood pressure and weight loss (which are signs that her condition is deteriorating) can happen quickly, and Jane has experienced this many times during the course of this pregnancy. Each time, when these signs are identified via telehealth data analysis, the nurse contacts the patient's physician and new orders for additional IV fluid have been obtained.

It is estimated that this telehealth monitoring has prevented at least three hospital admissions thus far for Jane and has allowed her to be assessed and cared for in the comfort of her home, without having to leave her children. Jane is currently 37 weeks along in her pregnancy, passing a milestone in fetal viability, and fetal growth is right on target. The patient has stated that telehealth not only helped pick up problems early but has given her peace of mind, since she knows health care professionals are closely monitoring her condition.

Telehealth Expertise: DHHS

The Arkansas Department of Health and Human Services (DHHS) utilizes and manages telehealth data and video over their 126 end-points, acting as both provider and recipient of clinical telehealth applications. DHHS uses its networks to reach over 10,000 users for a variety of purposes. For over 10 years, DHHS has used their networks to transmit medical records. For seven years, the networks have been used for video training and meetings. The organization also fronts the state's bioterrorism network, using video for the past three years for emergency preparedness.

DHHS collaborates with UAMS on a number of forward-thinking telehealth ventures. Among these are health care education and delivery services as orchestrated through the UAMS Rural Hospital Program and ANGELS. DHHS collaborated with UAMS to create ANGELS, playing an instrumental role in securing Arkansas Medicaid funding. Collaborating in weekly evidence-based guideline teleconferences, DHHS has helped refine best obstetrical and neonatal practices in Arkansas through ANGELS. The Department has also launched telehealth education programs through the Rural Hospital Program, having recently completed an annual diabetes telehealth education program, serving over 200 rural residents in the state. This program is designed to boost knowledge in self-management of diabetes in rural Arkansas, many areas of which do not have the access to a Certified Diabetic Educator. Through telehealth education, DHHS collaborates with the Rural Hospital Program to educate residents suffering from diabetes, thus making them more independent and confident in controlling their disease.

Public health uses DHHS networks for regularly scheduled Grand Rounds Lecture series each Thursday to provide CEU-approved training on public health, medical issues, preparedness, and other topics of interest to local public health officials and hospitals. Additionally, the DHHS Hospital Network is regularly used for emergency preparedness and response meetings and training. The network incorporates the use of video conferencing as part of regional and statewide preparedness drills to anticipate a efficient, well-connected response during an actual public health emergency or other man-made or natural disaster.

Telehealth Expertise: Arkansas Center for Health Improvement

The Arkansas Center for Health Improvement (ACHI) is a nonpartisan, independent health policy center jointly supported by the UAMS, DHHS, and Arkansas BlueCross/BlueShield. ACHI is currently completing a project funded by a national Health Information Security and Privacy Collaboration (HISPC) grant. HISPC grants were awarded to states to identify legal issues and barriers to the electronic exchange of health information and to develop a plan, including state and national recommendations, for overcoming those barriers.

ACHI was awarded the Innovation in Prevention Award issued by the US Health and Human Services Secretary and is the recipient of the Bronze Quill Award from the Arkansas Chapter of the International Association of Business Communicators.

Telehealth Expertise: Arkansas Department of Information Systems

The Office of Information Technology led Arkansas healthcare providers to form the Arkansas Telecommunications Oversight & Management (ATOM) Board. OIT staff continue to chair the effort and provide organizational support as that group develops a separate governance structure.

The Department of Information Systems (DIS) manages network solutions for Arkansas state government. The Department currently manages the Arkansas Interactive Video Network (VNet), one of the most comprehensive educational video networks in the country. Managing 520 total end-points, Vnet averages more than 20,000 video-conference hours per month, exclusive of point-to-point conferences. DIS will provide the project management for expansion, consolidation, and integration of the Arkansas Telehealth Network.

Telemedicine and Healthcare Expertise: Further ATOM Members

The bulleted list below describes the qualifications of the remaining members of the ATOM Board, who will actively participate in the decision-making process in this initiative.

- Arkansas Foundation for Medical Care: AFMC is a private-non-profit agency providing data management services, quality evaluation, and improvement programs. AFMC chairs a statewide eHealth initiative. AFMC has been conducting meetings and training through telehealth for the past nine years.
- Arkansas Hospital Association: A statewide trade association representing 104 hospitals, Arkansas Hospital Association will act as the conduit between Arkansas' hospitals and ATOM within the daily management of this alliance.
- Arkansas Research and Education Optical Network: ARE_ON is the statewide fiber backbone that will span the state of Arkansas and join with surrounding states to form a regional research and educational optical network. Fiber routes will be added with high-performance connections to additional locations in Arkansas as needed. Also, the network can host multiple separate and secure networks by adding new modules.
- Community Health Centers of Arkansas: This organization includes 55 private, non-profit health care organizations located in medically underserved areas of the state. Telehealth services will be expanded to include CHCA sites.
- DaySpring/TRACS: DaySpring is a privately owned behavioral health company with a recently established private, non-profit arm. With operations in 18 Arkansas communities, this organization sees promise in participating as a pay-as-you-go provider. In subsequent phases, their non-profit arm will also be linked within the network.
- Mental Health Council of Arkansas: Representing 15 fully-accredited private, non-profit Community Mental Health Centers, MHCA employs over 2,000 health care professionals in Arkansas. MCHA will look toward Arkansas' expanded telehealth network to extend services to its rural sites.
- Arkansas Department of Finance and Administration: The Arkansas Department of Finance and Administration is the state agency charged with oversight of the state employee benefit program. DFA is actively involved increasing the quality of healthcare while containing costs. The DFA representative to ATOM led the Internet2 subcommittee.
- Delta Regional Authority: The Delta Regional Authority is a federally-designated service area covering 240 counties in eight states of the Mississippi River Valley. The counties and parishes covered by the DRA make up the most distressed area of the country. The

disparities between the Delta region and the nation as a whole are stark. As defined by the Economic Development Administration, virtually all the counties and parishes in the region are distressed. Of the 240 counties and parishes served, 238 have per capita income levels at or below the national average. The poverty rate in the region is 55% higher than the national rate. DRA seeks to allow residents to achieve economic parity with the rest of the country, while improving their quality of life.

■ St. Vincent Health System: St. Vincent is a multi-site, multi-service healthcare delivery system stretched across Central Arkansas. Offering a wide range of clinics and services, St. Vincent is dedicated to bringing state-of-the-art treatment to Arkansans.

<u>Leadership</u>

As described in *Organizational Expertise*, this pilot program draws upon the leadership of Arkansas' telehealth pioneers. These leaders actively participate in the ATOM Board and will jointly direct the alliance's endeavors to ensure this pilot program is successful in contributing toward a nationwide broadband infrastructure. Brief biographies of ATOM leaders follow.

Curtis Lowery, MD is viewed as a champion of antenatal and neonatal telemedicine benefiting the patient and physician alike. Dr. Lowery has served as the Director of Obstetrics at the University of Arkansas for Medical Sciences since 1992. In that time, he facilitated the process in which Arkansas insurance handles telemedicine, increased Medicaid reimbursements and promoted understanding for telemedicine, and brought telemedicine access to over 60 hospitals and community clinics in rural Arkansas providing medical consultations combined with provider and patient education. Dr. Lowery has established a Medicaid-funded, cost-effective programmatic solution to assist Arkansas' high-risk pregnancies, ANGELS. This groundbreaking program has not only saved money by detecting problems early, it has also provided an efficient and innovative use of technology to serve a population of women who typically suffer from poverty, poor education, and poor health. Furthermore, the ANGELS program authors evidence-based obstetrical and neonatal guidelines facilitated through teleconferences with rural physicians. These weekly meetings initiated in 1998 and began with a teleconference of only three physicians. Participation has grown dramatically in these years to average 40 rural physicians and students in weekly attendance, developing over 100 evidencebased obstetrical and neonatal guidelines. Dr. Lowery recognizes that to stay innovative in his field, he must play the role of practicing physician, researcher, policy maker, and consultant. Every week, he sees a great number of obstetrical and gynecological patients, many women with high-risk pregnancies. Dr. Lowery strives to shape policy and improve technology in health care. Equally, he demands savings and cost efficiency in health care. He has successfully established relationships with Arkansas Medicaid and the Arkansas Medical Society to improve reimbursement policy for telemedicine. Consequently, he has demonstrated a significant return on investment for all his established programs, thus allowing endorsement from Arkansas Medicaid. Additionally, Dr. Lowery is a sought-after telemedicine speaker and consultant, with speaking engagements and consultations across the United States and the world.

Ann Bynum, EdD serves as Director of the UAMS Rural Hospital Program and Associate Director for Program Development for Program Development for the Arkansas AHEC program, has considerable experience in developing and implementing telemedicine programs. Dr. Bynum

is active in regional, state, and national telehealth organizations. Dr. Bynum has developed the statewide Rural Hospital Program network to encompass 50 rural hospital and clinic affiliates. The RHP has been recognized at state, regional and national levels for excellence in telehealth programs. Dr. Bynum serves on the American Telemedicine Association Research and Evaluation Task Force committees, and was the Governor's appointee to the Southern Governor's Task Force on Medical Technology. She is a frequent speaker on building telehealth capacity and infrastructure, evaluating results, and cost-effectiveness. Dr. Bynum has had a number of articles published in the Telemedicine Journal and e-Health, and other publications such as the Journal of Telemedicine and Telecare, the Journal of Health Promotion, the Journal of Rural Health, the Journal of School Health, and New Aspects of High Technology in Medicine (Germany). Dr. Bynum regularly presents at the American Telemedicine Annual Conferences, recently speaking on Patient Satisfaction With Mental Health Telemedicine in Rural Arkansas and Barriers To Cancer Genetic Counseling: Lessons Learned for Telemedicine Research

Debbie Green, FHIMSS is Director of Telecommunications for Baptist Health. Debbie currently is the President of Arkansas Chapter of HIMSS and has also served on the HIMSS National Board of Directors. She has presented at national and regional conferences, co-authored a HIMSS Telecommunications Handbook and written nationally published articles for telecommunications publications. Ms. Green has 30 plus years experience in healthcare and telecommunications. She has been instrumental in many innovative technology implementations, such as remote staffing for medical transcription and coding services; major voice and video systems; and analog, private digital microwave and broadband networks. She coordinated the efforts related to a trial for telemedicine for Emergency Room physicians within Baptist Health. Ms. Green is an enthusiastic supporter of telemedicine and its potential for improving healthcare delivery in Arkansas.

David House joined Baptist Health as the Director of Information Systems in 1991. Prior to then, David worked as an employee of IBM in a number of industries, including healthcare. In 1999, Mr. House was promoted to his current position as Vice President and CIO of Baptist Health. Baptist has a history of being innovative in many areas including information technology. In 1974 Baptist installed one of the first online order entry systems in the country. More recently Baptist has been a leader in the adoption of handheld technology by physicians and applications such as the electronic intensive care unit (EICU), Medical records imaging, PACS, and Vocera.

David is frequently quoted in a number or healthcare IT publications and most recently published an article entitled, "*Investing in Handhelds*" in <u>Advance for Health Information Executives</u>. David is listed in the <u>International Who's Who of Professionals</u> and <u>United Who's Who</u>. He is a member of the College of Healthcare Information Executives, the Healthcare Information and Management Systems Society, and the American Academy of Medical Administrators. He has served on a number of healthcare and technology company customer advisory boards such as AT&T and is active on the Arkansas Voluntary Hospital Association CIO Advisory Council.

Claire Bailey serves as Agency Director of the Department of Information Systems (DIS). In this role, she leads 200+ professionals responsible for the State of Arkansas' state network, telecommunications services, and information systems.

A few of Ms. Bailey's professional highlights include:

- Fifteen (15) years' experience in State Government
- International certification as a Professional Project Manager
- Project manager for Arkansas' first significant step toward Egovernment, Streamline Auto Renewal (STAR)
- Led system solutions for key agencies including
 - DFA State Drivers License
 - DHS Child Abuse and Neglect
 - Arkansas Public Retirement Systems (APERS)

Claire directed DIS' security program efforts, including the establishment of firewall and related security measures. She has chaired the Security Special Interest Group for the National Association of Telecommunications and Technology Professionals Serving State Governments. She also serves on the board of the Information Network of Arkansas (INA) and has served as co-chair of the Program Committee with the Arkansas InfraGard Chapter, an organization that is sponsored by the Federal Bureau of Investigation. Furthermore, she is dedicated to sharing security information in both the public and private sector.

Claire's private sector experience includes working as a Senior System Analyst at J.B. Hunt Transport in Lowell, Arkansas and as a Systems Analyst at Texas Instruments, Inc. She holds a Bachelor of Science degree in Computer Science from Texas A&M University at Commerce.

Claire is an active participant in the National Association of State Telecommunications Directors (NASTD), Central AR Project Management Institute (PMI), and Association for Users of Telecommunications and Information Systems (AUTIS).

Becky Rains, PMP works for Arkansas Department of Information Systems (DIS) as the Strategic Funding Program Manager. She has 26 years of telecommunication, technology, and management experience in the public and private sectors.

During the past16 years, Becky has served as Telecommunications Analyst, Telecommunications Engineer, Voice Mail Administrator, and Strategic Funding Program Manager for DIS. Becky received her certification in project management from the Project Management Institute (PMI). PMI is an international organization providing standards in the area of project management, in October 2001

In December of 2001, at Arkansas Governor Mike Huckabee's direction, the Arkansas E-rate Work Group (AEWG) was formed of which she is chair. The AEWG works on behalf of state agencies that serve K-12 students and public library patrons representing all E-rate applicants in the state of Arkansas. The AEWG continually monitors the E-rate program rules and regulations

and disseminates the information to the Arkansas applicants throughout the program year, thus assisting Arkansas applicants in complying with E-rate program rules.

In January of 2001, she was given the responsibility for DIS' Consortium E-rate process for Schools and Libraries Division. She moved to the Project & Enterprise Program Management Office (PEPMO) as Strategic Funding Program Manager in February 2002. This move allowed Becky to dedicate her time to E-rate funding for Arkansas. In 2003, Becky began working with rural health care providers in the filing for Rural Health Care E-rate funds. During this time, Arkansas has received E-rate funding commitments of \$94,364,061.52 from the Schools and Libraries Program and the Rural Health Care Program.

Rains is the Arkansas State E-rate Coordinator for Schools and Libraries. In this role, she interfaces with the Federal Communications Commission, Universal Service Administrative Company, Arkansas Governor's Office, Arkansas Legislators, Arkansas Legislative Research, Arkansas Rural Health Association, Arkansas Department of Education, Arkansas State Library, Arkansas public and private K-12 school districts, and public libraries. Rains is also a guiding member of the United States E-Rate Coordinators Alliance.

She is an active participant in two national level groups, State Coordinator's E-rate Alliance (SECA) and NASTD where she chairs the E-rate for Schools and Libraries and Rural Health Care special interest group. NASTD, Technology Professionals Serving State Government, is a member-driven organization whose purpose is to advance and promote the effective use of telecommunications technology and services to improve the operation of state government. NASTD represents telecommunications and technology professionals from the 50 states and the private sector. State members provide and manage state government communications services and facilities for state agencies and other public entities, often including hospitals, prisons, colleges, and universities. These members also play a strategic role in planning and shaping state government communications infrastructures and policies. Corporate members provide communications technology, services, and equipment to state government.

Becky is president and a charter member of the Arkansas Users of Telecommunications and Information Systems (AUTIS). AUTIS facilitates the rapid, timely information exchange as well as experiences and ideas between private or public sector consumers and the providers of telecommunications and information systems technologies.

Robert C. Donaldson has been retained by the Arkansas River Valley Rural Health Cooperative as a consultant for the proposed Arkansas Valley Telehealth Network Expansion Project. He is a 30-year veteran in the communications field. As President of Communication Associates Inc., Donaldson is responsible for the design and management of communications systems and wireless transmission systems. Recent projects have included: the development of a wireless transmission network for the Arkansas River Valley Rural Health Cooperative in Ratcliff, AR, capable of voice, video, and data transmissions and the design and implementation of a total communications network capable of data, voice, and video transmission for the University of Arkansas Winthrop Rockefeller Conference Center. Donaldson retired from UAMS in 2002. During his tenure at UAMS, he served as Director of Telemedical Communications, instructor in the College of Pharmacy, Director of Audiovisual Communications, Director of Medical

Communications for the regional medical program, and Chief of Instructional Television. Donaldson was responsible for the design and implementation of the UAMS Telemedicine Network, which became operational in 1992. Today, this network consists of 194 sites throughout the State of Arkansas, including 45 rural hospitals and eight Area Health Education Centers (AHECs). The UAMS Telemedicine Network offers educational courses and telemedicine consults.

Sip Mouden has served six years as the Executive Director of Community Health Centers of Arkansas, Inc., (CHCA) and the Arkansas Primary Care Association, which represents 12 federally qualified health centers and their 55 health center locations. Mrs. Mouden has served on the National Association for Community Health Centers Association (NACHC)/Primary Care Association Steering Committee for five years; is currently Co-Chair for NACHC Rural Health Committee; and is on the NACHC Legislative and Policy Committees. Sip also serves on the NACHC P4P Sub-Committee, NACHC/PCA HIT Sub-Committee, Arkansas HISPC Steering Committee, Arkansas Quality Management Committee, Arkansas FCC Tele-Health Steering Committee, Arkansas Regional Programs Advisory Board, the Cancer Coalition Board of Directors, Arkansas Oral Health Coalition, Arkansas Delta Rural Development Network Steering Committee, Minority Health Consortium, among many other committees and coalitions. Mrs. Mouden also is a UAMS, College of Public Health faculty member.

Prior to joining CHCA, Sip had 25+ years of health and social services administrative and management experience within major medical and academic institutions, state government, private, for-profit health care businesses, insurance, and not-for-profit organizations within the following but not all inclusive areas: financial management; contract development, negotiations, and management; grant development and management; policy, program, and systems development, implementation, and evaluation; marketing, outreach and sales; quality improvement, risk management, and utilization review. These responsibilities have been within primary care; emergency medicine; multi-specialty practices, acute, med-surgery, and outpatient rehabilitation services; home health; long-term care mental health services; developmentally disabled programs; managed care for workers' compensation; juvenile delinquency prevention and treatment; prenatal care; and unwed teen pregnancy programs.

William Mason, MD serves as the Branch Chief of Preparedness and Emergency Response, Arkansas Department of Health and Human Services. He holds a B. S. in Zoology from the University of Arkansas, B.S.M., and M.D. from the University of Arkansas for Medical Sciences. After completing his internship in 1969, he served the Air Force as a flight surgeon. Upon completion of military service, he returned to Arkansas where he completed a residency in internal medicine and fellowship in pulmonary diseases. He is board-certified in both internal medicine and pulmonary diseases. Dr. Mason established a private group practice in Little Rock specializing in pulmonary diseases. He has served in various leadership positions in tertiary hospitals. From 1994 until 2002, he worked with a local hospital system in developing an integrated health care delivery system. In July 2002, he joined the Arkansas Department of Health as a physician specialist and Medical Director for Public Health Preparedness. In 2005, he became Branch Chief of Preparedness and Emergency Response for the Division of Health. He is currently a student in the MPH program, College of Public Health, University of Arkansas for Medical Sciences.

Dr. Mason was the team leader for the Georgetown University Refugee Medicine Group in Northern Thailand in 1980, which received the Catholic Hospital Association Achievement Citation. He has received several awards to include the Excellence in Health Care Individual Award from the Arkansas AIDS Foundation in 1988. He was featured in the New York Times in 1997 in an article titled, "Unlearned, Unhealthy and Mostly Uninsured" which detailed the plight of the Little Rock's poor seeking medical care.

Nancy Archer, RN, CPHQ, Assistant Vice President of Quality, leads over 30 quality improvement, health information technology, and outreach professionals at the Arkansas Foundation for Medical Care, the Medicare Quality Improvement Organization of Arkansas. She has acted as the project lead for the Doctor's Office Quality Information Technology (DOQ-IT) project since the pilot's inception in 2004, as well as the more recent Medicare Care Management Performance P4P program. Through her work at AFMC, she also develops quality improvement initiatives directed at Arkansas' Medicaid program on behalf of the Arkansas Department of Health & Human Services-Division of Medical Services. Ms. Archer is a Certified Professional of Healthcare Quality.

Cathy Flanagin is the Hospital Preparedness Section Chief for DHHS. She is responsible for implementing the HSS Hospital Preparedness Grant. She works with hospitals and other community preparedness partners at the local and state level to help ensure Arkansas hospitals have the medical surge capacity to handle a natural disaster or other public health emergency.

She has served as Director of Community Health Improvement for the Arkansas Department of Health. She was responsible for implementation of Hometown Health Improvement, a community-based health planning and assessment process, for the State. Prior to this she worked for the Office of the Deputy Director of Policy and Planning. Responsibilities included developing, implementing, and monitoring the strategic planning process for the Department. She also participated in the development of public health legislation and the development of public education and information materials including: Governor's Report, Annual Report, Media Campaigns, Director's newspaper column, Scripts for radio and television Public Service Announcements, and Press Releases.

Before coming to the Health Department, Flanagin worked for the Arkansas Bureau of Legislative Research for 13 ½ years. She served as the staff consultant for the Joint Interim Committee on Public Health, Welfare and Labor; the Hospital and Medicaid Study Committee; the Joint Interim Committee on Agriculture and Economic Development; the Joint Interim Committee on Children and Youth and other legislative subcommittees of the Arkansas General Assembly. She was responsible for tracking state and federal legislation, interpreting and summarizing legislation, conducting research, preparing reports, coordinating meetings, and presenting information to Legislators, the press, the public, and state agencies. Flanagin has drafted resolutions, preliminary bills, and legislative interim study proposals; worked with state agencies, other states, lobbyist, interest groups, public foundations, congressional offices and federal agencies to obtain information and coordinate activities; and attended and participated in meetings for legislators.

Flanagin graduated from Hendrix College with a degree in history and political science and received her Masters Degree in Interpersonal and Organizational Communications from the University of Arkansas at Little Rock.

Warren Bankson has worked for the Department of Health since 1990. He was hired to install and maintain the statewide WANG network for the department. He has re-engineered two major WANG network topology changes by increasing bandwidth. He designed and installed the department's Microsoft Network Domain, designed and implemented the merger of the WANG System to run on a routed IP based network, designed and implemented the current statewide data network for the department, designed and upgraded the statewide health network to provide video conferencing to 45 video conference sites in the Health Department's network, designed and implemented the statewide Hospital/BT Data Network, comprising 84 critical care hospitals, designed and merged video conference services to the statewide Hospital/BT Data Network, and designed and merged the two networks of Health and Hospital/BT to provide an intergraded video conference network.

Warren is the division's Network Administrator / Engineer and is working to bring the two departments of DHS (Department of Human Services) and DOH (Department of Health) into one unified domain of DHHS (Department of Health and Human Services).

Project Management Plan

Management Plan

The management plan of this initiative stems from a collaborative approach between ATOM Board members. The ATOM Board is currently comprised of 16 partnering health care organizations, and other governmental or private, non-profit health or technology organizations are invited to join the Board.

Membership in the ATOM Board is open to any health or technology-related organization (governmental, private non-profit, or private-for-profit). Membership is intended to promote broad access and advocacy for telehealth services. Members elect representation to the ATOM Advisory Committee. Each organization is afforded one vote.

The ATOM Advisory Committee is responsible for keeping the membership informed, responding to the concerns of ATOM members, and providing recommendations and advice to the Operational Board. The Advisory Committee meets at least quarterly and is comprised of nine permanent and two elected members:

Permanent Members (9)

- Arkansas Center for Health Improvement
- Arkansas Department of Health & Human Services
- Arkansas Hospital Association
- Arkansas Department of Information Systems
- Arkansas Foundation for Medical Care
- Arkansas Research & Education Optical Network
- Baptist Health

- Community Health Centers
- University of Arkansas for Medical Sciences

Elected Members (2)

• To be elected

The ATOM Operations Board oversees daily activities related to the Arkansas Telehealth Network. The board makes the day-to-day decisions required to maintain the network and oversees contractual services.

Permanent Members:

- Arkansas Department of Health & Human Services
- Baptist Health
- University of Arkansas for Medical Sciences

Appointed Members:

- Small hospital representation appointed by the Arkansas Hospital Association
- Medium-sized hospital representation appointed by the Arkansas Hospital Association

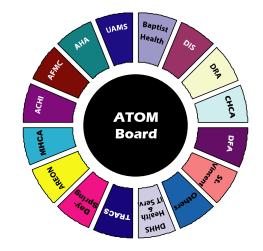
The University of Arkansas for Medical Sciences, the designated applicant for the FCC Rural Health Care Pilot Program, bears the sole financial and legal responsibility of carrying out the obligation and requirements of this program.

Management Structure

UAMS will work under the direction of ATOM members through the ATOM Board. To exemplify the diversity of partners in ATOM, Figure 6 below depicts the names of each organizational ATOM Board member, each sharing equal authority in board decisions and responsibility for the success of the pilot program. All members will participate in decision-making and management. AHA, DHHS, Baptist Health, and UAMS will collaborate to function as the ATOM Board Operations Committee, as discussed in *Management Plan*.

Figure 6: ATOM members include: University of Arkansas for Medical Sciences (UAMS), Baptist Health, Department of Information Systems (DIS), Delta Regional Authority (DRA), Community Health Centers of Arkansas (CHCA), Department of Finance and Administration (DFA), St. Vincent, DHHS Health & IT Services, TRACS, Day Spring, Arkansas Research & Education Optical Network (AREON), Mental Health Centers of Arkansas (MHCA), Arkansas Center for Health Improvement (ACHI), Arkansas Foundation for Medical Care (AFMC), Arkansas Hospital Association (AHA), and others as they choose to join

Figure 6: ATOM Board Members



Work Plan

Arkansas currently has three (3) separate telehealth networks in the state, which will be consolidated, updated, expanded, and managed, thus creating the Arkansas Telehealth Network. These networks include over 150 sites among UAMS, Baptist Health, and the Arkansas Department of Health and Human Services; the latter linking disaster response, critical access hospitals, and Health Department clinical sites.

Consolidation is the first step of the work plan, and this task will be achieved through the following steps, as proposed by ATOM's membership of stakeholder technologists:

1. The DHHS network will be connected to the UAMS network by enabling a shared connection between the separate networks over a common network backbone. DHHS will then facilitate UAMS to manage video conferences for each end node via one IP

address. This will create a consolidated network between DHHS and UAMS.

2. Baptist Health will be connected into the DHHS network through the same method described in Step 1. After connection is achieved, all 150+ existing telehealth sites will be able to easily communicate.

Next, the Arkansas Telehealth Network will expand. Several tasks will be tackled concurrently during this step, which include 1) telehealth upgrade and addition for sites in rural, underserved areas, 2) connection to the Arkansas Interactive Video Network (Vnet), 3) connection and full access to Internet2, 4) and full access to Arkansas' dark fiber network. Due to ease in communication achieved through telehealth network consolidation, these efforts will be tackled concurrently. The final product: a fully-connected, technologically forward-thinking telehealth network serving every area of the state that can support 300 H.323 (IP) endpoints.

The steps described below will achieve each of these efforts.

- 1. Expansion to include update and addition of telehealth sites: Several areas of Arkansas do not have ready access to telehealth services. To achieve this expansion, possible network connection options include a dedicated T1 or multiple T1, secure wireless, dark fiber, leased fiber, etc. This effort will be accomplished by utilizing the appropriate network options for the community. First priority for upgrade to increased bandwidth will be sites located within the service area of the Delta Regional Authority (DRA). The DRA is a federal/state partnership developed to enhance economic development and improve the quality of life for residents of the Mississippi Delta. The prioritization of installation has been determined by the ATOM Board and included below. Further, please see Appendix A: Maps Exhibit 3 for a better idea of site expansion locations and types.
- 2. Expansion to include Arkansas Interactive Video Network: The Arkansas Interactive Video Network (Vnet) consists of over 500 video systems, on the State backbone data network, primarily serving K-12 schools, colleges and universities, and health locations. This network is utilized for over 20,000 conference hours per month. The proposed

consolidated network will also provide for bridging Vnet sites and the consolidated telehealth sites. This will provide for additional locations to be available for healthcare.

- 3. Expansion to include Internet2 access: The Arkansas Telehealth Network will be connected to Internet2 via UAMS, which has an existing connection through the Regional Health Network program. This process will involve ensuring that each end point has a public IP address to participate in point-to-point and as well as multi-point video conferences. To receive the full functionality of Internet2, each site would install a router capable of connecting to an Internet service provider and the Arkansas Telehealth Network. From this connectivity, the Arkansas Telehealth Network will take advantage of dedicated bandwidth between research and medical institutions for video conferencing and data sharing.
- 4. Expansion to include Arkansas' dark fiber network: The Arkansas Research & Education Optical Network (ARE_ON) is currently estimating the launch of its dark fiber backbone in summer 2008, at which time the Arkansas Telehealth Network will connect to reap the full benefits of this technological advance in Arkansas. Using dark fiber, this backbone will utilize dense wave technology. Currently, ARE_ON is lighting fiber optic backbone routed throughout Arkansas that will provide connectivity to Internet2, with a possible merger with the National LamdaRail. A fiber backbone will benefit the network with high bandwidth and throughput for functions such as digital video; medical image sharing ultrasounds, echocardiograms, EKG / MRI, etc.; sharing of large data sets for research and patient care; etc. For an illustration of the ARE_ON fiber route, please see Appendix A: Maps Exhibit 3.

<u>Installation Priorities</u>

The ATOM Board has agreed on a priority ranking of sites to determine which locations are in greatest need of update and expansion. The criteria to be used for priority ranking during implementation are included below. For further details on sites selected for expansion, please see Appendix B: *Network Site Details*.

- A. Counties covered by the Delta Regional Authority
 - 1. [PRIORITY CODE 1] Critical Access Hospitals & At-Risk Hospitals
 - 2. [PRIORITY CODE 2] Federally Qualified Health Centers / Community Health Centers
 - 3. [PRIORITY CODE 3] DHHS County Health Units
 - 4. [PRIORITY CODE 4] Community Mental Health Centers
 - 5. [PRIORITY CODE 5] Nursing Schools
 - 6. [PRIORITY CODE 6] Out-patient Therapy Centers
 - 7. [PRIORITY CODE 7] K-12 Education Sites
 - 8. [PRIORITY CODE 8] Private pay-as-you-go health facilities

- B. Counties not covered by the Delta Regional Authority
 - 1. [PRIORITY CODE 9] Critical Access Hospitals & At-Risk Hospitals
 - 2. [PRIORITY CODE 10] Federally Qualified Health Centers / Community Health Centers
 - 3. [PRIORITY CODE 11] DHHS County Health Units
 - 4. [PRIORITY CODE 12] Community Mental Health Centers
 - 5. [PRIORITY CODE 13] Nursing Schools
 - 6. [PRIORITY CODE 14] Out-patient Therapy Centers
 - 7. [PRIORITY CODE 15] K-12 Education Sites
 - 8. [PRIORITY CODE 16] Private pay-as-you-go health facilities

Within each priority group, the order of installation will be determined by RUCA code and efficacious use of installation resources. This priority ranking will act as a tool when adding telehealth resources to rural areas of Arkansas.

Network / Program Coordination

Network management is the catalyst that creates a functional telehealth network. Without the management component, a network is only dysfunctional connections. The current method of creating a connection between multiple sites is analogous to the use of telephone operators before the advent of automatic telephone exchanges. We must move the consolidated network into a new age, not dependent upon humans physically making the connections.

To support these efforts, immediate and continuous management of this statewide infrastructure is essential to ensure utilization and sustainability. This management includes scheduling and maintenance components.

Scheduling will be conducted by a web-based software application that allows each site to schedule video conferences. Scheduling staff will then ensure that the MCU is setup to dial each site scheduled for a video conference. Point-to-Point H.323 (IP) based conferences will be allowed, requiring scheduling so that any site desiring a point-to-point conference can see the availability of equipment. All participating sites will be encouraged to use the scheduling system to ensure the availability of equipment for a conference. Maintenance and support activities that will be performed for this initiative include: technical support for scheduled video conferences to ensure each participating site has connected; coordination with site IT staff to setup and maintain connectivity; and training of sites on use of scheduling software, video conferencing equipment, use of medical equipment, transmission of medical images, etc.

Priorities and scheduling of the networks can be overridden by the State Health Officer in the event of a public health emergency. With all these efforts, the Arkansas Telehealth Network will greatly enhance its ability to reach rural Arkansas with subspecialty support and new, improved telehealth applications. The Arkansas Telehealth Network will be enabled to handle a multitude of technological applications through improved bandwidth. Sites will receive improved bandwidth capacities as necessary and available to support technologies. For example, a current T1 (1.5 Mbps) may initially be upgraded to 3 Mbps service by adding a second T1 and

eventually a fiber optic connection with multi-gigabit capacity (1-10 gigabit is common). Improvement in bandwidth capacity yields the following benefits to Arkansas' rural facilities:

New, improved applications

- Radiology PACs
- Cardiology Systems Echocardiogram, EKG's, Cardiac Cath
- Electronic Medical Record
- Regional Health Information Organization (RHIO)
- And many more

Potential improved information sharing:

- Sharing of patient records electronically between hospitals at patient's request
- Sharing of patient records electronically between hospital and clinic business partners
- Arkansas and eventually federal Electronic Health Record transmission
- Broadcast to all sites on the Arkansas Telehealth Network during a bio-terrorism event

Schedule

A detailed schedule has been developed for the current, ongoing, and upcoming efforts required for this initiative. The chart provided in Appendix E: *ATOM Schedule* outlines the strategic scheduling process and its related processes.

Budget & Justification

The proposed pilot program and match budget have been itemized and justified in Appendix C: *Budget and Justification*. ATOM has refined the budget to include year 1 and year 2 costs, with detail on the contents of match funding. These costs have been justified, which are all included in the Appendix C: *Budget and Justification* of this proposal. Total requested funding for year 1 is \$2,396,230, with a total of \$2,658,758 in year 2 costs.

Sustainability

Short-term Network Sustainability

Arkansas' current telehealth networks are self-sustaining through direct end-user fees and allocated state funds supporting state departments, such as DHHS, and facilities, such as the UAMS. These funds support all telehealth activities across Arkansas. Consolidation of many of the overlapping networks in Arkansas will be a one-time expense, paid through the proposed grant funds, while the maintenance of the new Arkansas Telehealth Network will be supported by existing state telehealth funds. Further, for-profit organizations will pay to participate in the network, thus bringing a degree of additional revenue to new network, as described in the Description of Network & Design section of this proposal.

It is anticipated that upon consolidation of networks and thus improving statewide telehealth efficiency, cost effectiveness and financial savings will result in year-to-year maintenance costs. Therefore, the current funding level may be sufficient for short-term sustainability of the

Arkansas Telehealth Network beyond the program funding period. In acknowledgement that ATOM's efforts will persist beyond the time boundaries of this project, long-term sustainability plans have been developed identifying possible and anticipated funding streams.

Long-term Network Sustainability

The ATOM Board has already begun seeking long-term support for the Arkansas Telehealth Network through the state legislature. In the 2007 session of the Arkansas 86th General Assembly, Senator Paul Bookout passed Senate Resolution 30 requesting an interim study for expansion and consolidation of Arkansas' telehealth networks. This study will take place through the Senate Committee on Transportation, Technology, and Legislative Affairs and the House Committee on Advanced Communications and Information Technology. ATOM expects these hearings will set the stage for introduction of legislation to allocate state monies to ATOM and the statewide consolidated telehealth network. Senator Bookout's Senate Resolution 30 is included in Appendix H: *Senate Resolution*.

Even during ATOM's development, this innovative collaboration secured the attention of business partnerships and ventures that could contribute toward the long-term sustainability of the Arkansas Telehealth Network. The Colleges of Engineering and Business at the UA-Fayetteville recently announced that they will partner with the Wal-Mart Stores, Inc., Blue Cross Blue Shield, and medical providers like UAMS to create an interdisciplinary research center focused on improving the healthcare delivery system through the use of information technology. That Center for Innovation in Healthcare Logistics will target research aimed at identifying and addressing gaps and roadblocks in the application and delivery of health that can be addressed with improved information and logistic flows, as well as highlighting and replicating proven applications that are working to benefit patients and providers. ATOM has been recognized by this new Center, which stated that through its vision to reach beyond large urban hospitals to the challenges of bringing healthcare to massively under-served rural and minority populations, the proposed ATOM infrastructure will be invaluable to the Center's making progress on this part of its mission. Innovative new approaches to cost-effective distance healthcare delivery, developed in partnership between the University of Arkansas at Fayetteville and UAMS, could be among the early breakthrough software solutions enabled by the ATOM network. This collaboration is documented through a letter of support included in Appendix D: Letters of Support.

ATOM anticipates certain benefits through this analysis of the necessity of telehealth services in Arkansas long-term network sustainability. First, this study creates the foundation essential for legislative movements to provide allocations to the sustainability of the Arkansas Telehealth Network. This appeal will be strengthened by allowing the state's health care agencies to benefit from telemedicine, thus recognizing the diverse uses and limitless possibilities offered through this technology. Arkansas' health care organizations and stakeholders will come to recognize telehealth as a vital part of the health care administration, thus increasing interest and contribution toward this proposed technology initiative.

Utilizing the evaluative outcomes yielded through this pilot program, ATOM will lobby to increase reimbursable services. ATOM will draw attention to the fact telehealth is economically beneficial to the rural areas of the state, encouraging patients to seek specialty and subspecialty support in their hometowns. Rural hospitals will keep these patients' billing, thus bringing

money into their facilities. Telehealth also lessens the personnel burden needed at rural hospitals. It may be impossible to staff specialists throughout all the rural areas of the state, but specialty care can be delivered through telehealth at a fraction of the cost of paying a full-time specialist to care for the rural community. Telehealth is known for its ability to keep and bring money into the communities it serves. In a recent UAMS study, the Rural Hospital Program estimated that by empowering patients to seek primary and specialty care in their hometowns, rural hospitals using telehealth technology create a \$24.5M total economic impact on the community. This direct and indirect revenue allows the community to free up financial resources to contribute toward the sustainability of the broadband network. In fact, the greatest evidence of Arkansas' ability to sustain its network stems from its efforts in building the current telehealth infrastructure. After grant funding ended to support current telehealth network sites, participating hospitals became self-sustaining, paying their personnel and line charges from revenues generated through the use of telemedicine. Arkansas has sustained its networks in the past and expects the trend to continue by nurturing the development and improvement of this technology. Further, ATOM will work toward estimating return-on-investment to encourage insurance companies to develop vested interest in telehealth. As it stands, Arkansas Medicaid allows reimbursement for telehealth services, and ATOM will seek further insurance agencies to follow Arkansas Medicaid's model of reimbursement.

This initiative, while delivering and enhancing needed services to rural Arkansas, will concurrently modify Arkansas' healthcare system, thus urging the attention of continued funding through state legislation. From the expected results of this pilot program, Arkansas' leaders will recognize that the state faces a vast number of widespread health care shortages, barriers, and needs, and telehealth is the key to overcome these problems for the good of all Arkansans.

Evaluation

To best determine the continuing success of ATOM's efforts, while simultaneously identifying areas for programmatic improvement, process and program evaluations will be conducted through the ATOM Board. Data collected from specified resources originating from the ATOM membership will be assessed on a quarterly basis. The ATOM Board will meet to discuss evaluation outcomes, utilizing UAMS' research and development resources to collect and analyze data, composing results in a quarterly report for review and refinement as furnished through the ATOM Board.

Evaluation of this initiative will be conducted through two related methods: Process and Program. The initial phase will monitor the process in achieving the objectives set forth by this pilot program. The second method gauges the programmatic success in delivering timely and strategic plans, while monitoring patient and community impact.

Process Evaluation

The procedural success of the project will be measured to determine the success in achieving the proposed goals and objectives. In this evaluation method, baseline data will be collected to determine the current level of capacity in terms of bandwidth of connections and the level of services currently being delivered over this bandwidth. Equipment and connections will be monitored based on a minimum connection bandwidth. Facilities will be grouped by type and a

minimum adequate connection speed will be identified for each type. Baseline data will be collected on the number of facilities already connected at the beginning of the grant implementation. As the program continues, counts of facilities connected at the minimum connection bandwidth will be calculated. Using the proposed objectives, success will be measured.

The effectiveness of the increased bandwidth and connection speed will be measured by the impact on telehealth service delivery rates. A sample of telehealth service facilities will be monitored over the life of the pilot program. Baseline levels of service delivery will be counted prior to the beginning of the program. As the program continues, service delivery levels will be tracked to determine the level of increased service activity by service. Pilot program monitoring will be tracked using of the form provided in Appendix F: *Evaluation Tools*. This proposed tool is subject to change prior to project evaluation but will encompass similar elements and measures.

Program Evaluation

The proposed program will be evaluated for its effectiveness on a number of parameters. ATOM has selected evaluation protocols that will measure success that can be achieved within the confines of the grant period. Since this timeframe is relatively brief in length, some of the greatest impacts, as seen in outcome measures, will have to be monitored, rather than evaluated for success during the grant period. As such, ATOM will conduct a program and process evaluation of the proposed project, while patient and community outcome measures will be monitored to determine any short-term impact. Over the course of this pilot, program and process evaluations, coupled with outcomes monitoring, will be performed using baseline measures established upon implementation.

The program evaluation will assess the program's ability to achieve deliverables on a timely and calculated basis. Based upon the explained project goals and objectives, Table 3 explains the program evaluation parameters to be measured, with accompanying data sources.

Table 3: Program evaluation p	parameters	
Program Measure	Data Sources	Evaluation Method
Creation of statewide	ATOM Board meeting	First quarter review of
broadband health network	minutes and progress reports.	achievement of time-based
design plan within months 1-3.		objective.
Combination of Arkansas'	ATOM Board meeting	Second and third quarter
separate, existing broadband	minutes and progress reports.	review of achievement of
networks within months 4-9.		time-based objective.
Implementation of centralized	ATOM Board meeting	Second and third quarter
statewide scheduling and	minutes and progress reports.	review of achievement of
management within months 4-		time-based objective.
9.		
Connection to Internet2 within	ATOM Board meeting	Third quarter review of
months 6-9.	minutes and progress reports.	achievement of time-based
		objective.

Identification of private	ATOM Board meeting	Third to final quarter review
telehealth providers within	minutes and progress reports.	of achievement of time-based
months 6-24.	Payment schedules created.	objective.
Connection of K-12 school	ATOM Board meeting	Fourth quarter review of
network.	minutes and progress reports.	achievement of time-based
		objective.
Establishment of network's	ATOM Board meeting	Second year quarterly review
fiber backbone.	minutes and progress reports.	of achievement of time-based
		objective.

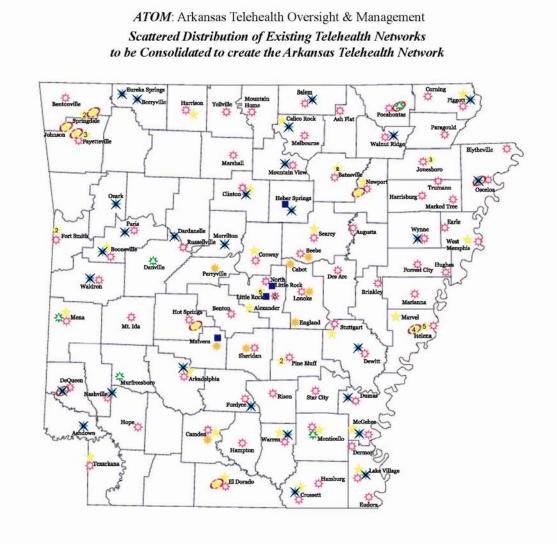
To further determine the programmatic success of the pilot program, ATOM will monitor farreaching outcomes that may not be achieved within the brief grant period. Ensuring that baseline data is collected and success can be monitored in the future, ATOM will determine specific outcome measures to monitor on a yearly basis; the following measures serve as examples:

- Treatment costs in rural areas
- Census in rural hospitals
- Speed of treatment
- Amount of family travel
- Number of outlying transfers

The combined process and program evaluations will provide a comprehensive perspective of the success achieved by this ambitious project. By collecting and assessing this data, the foundation will be laid for funding legislation, future grant requests, contributions toward telehealth research and publications, and long-term sustainability of the Arkansas Telehealth Network through development of a model, statewide telehealth program. Through the FCC Rural Health Care Pilot Program support, rural Arkansas can make strides in its telehealth infrastructure, while creating a nationally-recognized representation of telehealth success.

$\underset{\mathit{Maps}}{\mathsf{Appendix}} \ \mathsf{A}$

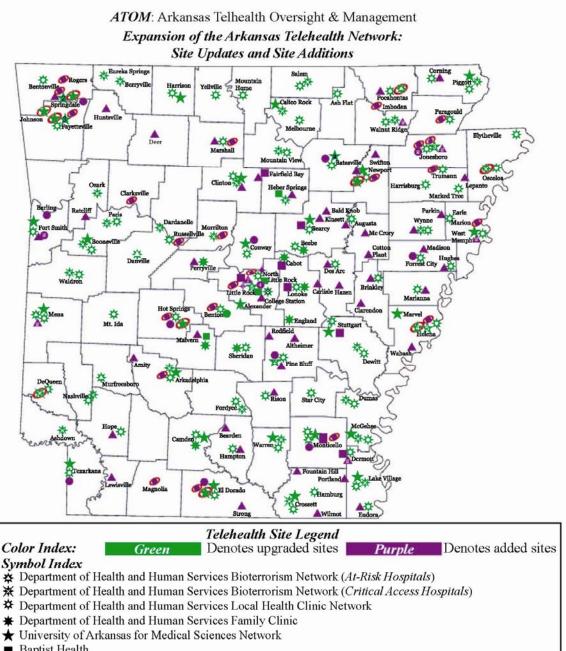
Exhibit 1: Arkansas' existing, scattered telehealth networks to be consolidated into the Arkansas Telehealth Network.



Telehealth Site Legend

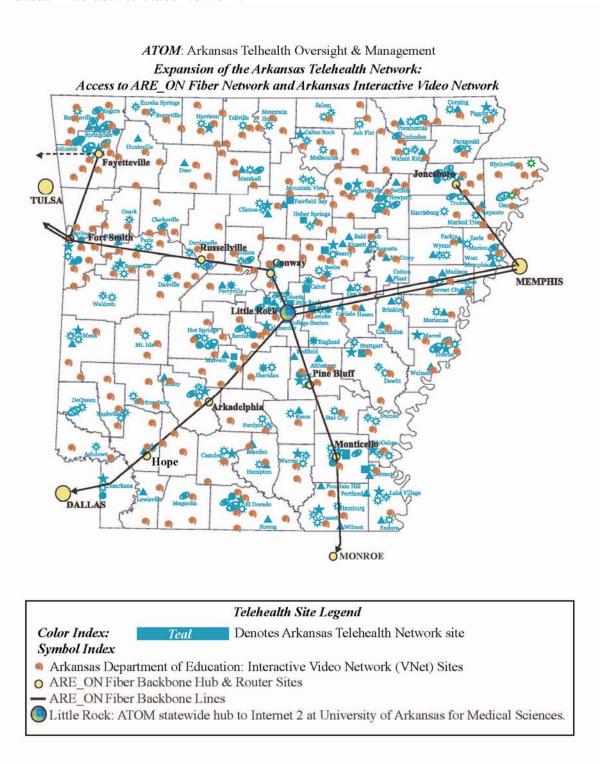
- The Department of Health and Human Services Bioterrorism Network (At-Risk Hospitals)
- ★ Department of Health and Human Services Bioterrorism Network (Critical Access Hospitals)
- Department of Health and Human Services Local Health Clinic Network
- * Department of Health and Human Services Family Clinic
- University of Arkansas for Medical Sciences Network
- Baptist Health
- O Denotes for-profit status.

Exhibit 2: Expansion of the Arkansas Telehealth Network through update of existing site connections and addition of new site connections.



- Mental Health Council of Arkansas Community Mental Health Clinic and Dayspring / TRACS Mental Health
- Community Health Centers of Arkansas Community Health Center and Baptist Health Clinic
- ATOM Member Site
- Other Hospital
- Denotes for-profit status.

Exhibit 3: Expansion of the Arkansas Telehealth Network to include (1) the ARE_ON dark fiber backbone providing statewide member connection to Internet2 and (2) connection to Arkansas' Interactivel Video Network.



Appendix B Network Site Details

Arkansas Telehealth Network Consolidation and Expansion Priorities

A. Non-profit agencies

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
	1		a .:	Critical			100 0			501-		
1	0.	Upg	Calico	Access	DND	Community Medical	103 Grasse	72510	C4	450-	1	Y
1	6	rade	Rock	Hosp. UAMS	P-N-P	Center – Stone County	Street	72519	Stone	2110 870-	1	es
	0.	Upg	Calico	Networ		Community Medical	103 Grasse			297-		Y
1	6	rade	Rock	k	P-N-P	Center – Izard County	Street	72519	Stone	3726	1	es
-	1	Tude	Hoon	Critical	1 1, 1	Contor Izara County	Succe	, 2019	Stone	870-	Ė	
	0.	Upg		Access			679 North			563-		Y
1	5	rade	Salem	Hosp.	Govt	Fulton County Hospital	Main Street	72576	Fulton	7190	1	es
				Critical						870-		
	1	Upg	Mountain	Access			Highway 14			269-		Y
1	0	rade	View	Hosp.	P-N-P	Stone County Hospital	East	72560	Stone	4361	1	es
	_			Critical			2729 Hwys			870-		
1	7.	Upg	Lake	Access	C4	Chiest Managial Hamital	65 & 82	71.652	Claire	265-	1	Y
1	4	rade	Village	Hosp. Critical	Govt	Chicot Memorial Hospital	South	71653	Chicot	5351 870-	1	es
	7.	Una		Access		Cross Ridge Community	310 South			208-		Y
1	4	Upg rade	Wynne	Hosp.	P-N-P	Hospital	Falls Blvd.	72396	Cross	2108	1	es
1	_	race	vv ymic	UAMS	1-11-1	Hospitai	2729 Hwy	12370	CIOSS	870-	1	CS
	7.	Upg	Lake	Networ			65 & 82			265-		Y
1	4	rade	Village	k	Govt	Chicot Memorial Hosptial	South	71653	Chicot	5351	1	es
				Critical						870-		
	7.	Upg	Walnut	Access		Lawrence Memorial	1309 West		Lawre	886-		Y
1	3	rade	Ridge	Hosp.	Govt	Hospital	Main Street	72456	nce	1265	1	es
				At Risk						870-		
		Upg		Hospita			778 Scogin			460-		Y
1	7	rade	Monticello	1	Govt	Drew Memorial Hospital	Drive	71655	Drew	3539	1	es
				At Risk		C D . 134 1 1	1703 North		A 1	870-		3.7
1	7	Upg	Ctrettmont	Hospita	DND	Stuttgart Regional Medical Center	Buerkle Road	72160	Arkans	672- 9741	1	Y
1	/	rade	Stuttgart	Critical	P-N-P	Center	Road	72160	as	870-	1	es
		Upg		Access		Ashley County Medical	1015 Unity			364-		Y
1	7	rade	Crossett	Hosp.	P-N-P	Center County Wedicar	Road	71635	Ashley	1295	1	es
				Critical			1641 South	,		870-	Ť	
		Upg		Access			Whitehead		Arkans	946-		Y
1	7	rade	DeWitt	Hosp.	P-N-P	DeWitt City Hospital	Street	72042	as	3571	1	es
				Critical			300 East			870-		
		Upg		Access			Pickens		_	382-		Y
1	7	rade	Dumas	Hosp.	P-N-P	Delta Memorial Hospital	Street	71639	Desha	4731	1	es
				Critical			201 07:2			870-		,.
1		Upg	E4-	Access	C	Dellas Counts II 1/1	201 Clifton	71740	D-11	352-		Y
1	7	rade	Fordyce	Hosp.	Govt	Dallas County Hospital	Street	71742	Dallas	6300	1	es
		Hea		Critical		McGehee-Desha County	900 South			870- 222-		Y
1	7	Upg rade	McGehee	Access Hosp.	Govt	Hospital	Third Street	71654	Desha	2134	1	es
1		rauc	MICGENEE	Critical	GUVL	поэрна	1206 Gordon	/1034	Desila	870-	1	CS
		Upg		Access		Piggott Community	Duckworth			598-		Y
1	7	rade	Piggott	Hosp.	Govt	Hospital	Drive	72454	Clay	3881	1	es
				Critical		p	404 South			870-	Ť	
		Upg		Access		Bradley County Medical	Bradley		Bradle	226-		Y
1	7	rade	Warren	Hosp.	P-N-P	Center	Street	71671	у	4301	1	es
				UAMS						870-		
		Upg		Networ		Ashley County Medical	1015 Unity			364-		Y
1	7	rade	Crossett	k	P-N-P	Center	Road	71635	Ashley	1295	1	es

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
1	7	Upg rade	McGehee	UAMS Networ k	Govt	McGehee-Desha Hospital	900 South 3 RD Street	71654	Desha	870- 222- 2134	1	Y es
1	7	Upg rade	Monticello	UAMS Networ k	Govt	Drew Memorial Hospital	778 Scoggin Drive	71655	Drew	870- 460- 3539	1	Y es
1	7	Upg	Piggott	UAMS Networ	Govt	UAMS – Piggott Community Hospital	1206 Gordon Duckworth Drive	72454	Clay	501- 686- 8000	1	Y
1	7	Upg rade	Stuttgart	UAMS Networ k	P-N-P	Stuttgart Regional Medical Center	North Buerkle Road	72160	Arkans as	870- 672- 9741	1	Y es
1	4	Upg rade	Batesville	UAMS Networ k	P-N-P	White River Medical Center	1710 Harrison Street	72501	Indepe ndence	870- 262- 1200	1	Y es
1	4	Upg rade	Camden	UAMS Networ k	P-N-P	UMS/Ouachita County Medical Center	638 California Street	71711	Ouachi ta	870- 836 1522	1	Y es
1	4	Upg rade	Helena-W. Helena	UAMS Networ k	Govt	AHEC/Delta 768K	119 Hickory Hill Drive	72342	Phillip s	870- 572- 2727	1	Y es
1	4	Upg rade	Helena-W. Helena	UAMS Networ k	Govt	AHEC/Delta 768K	119 Hickory Hill Drive	72342	Phillip s	870- 572- 2727	1	Y es
1	4	Upg rade	Helena-W. Helena	UAMS Networ k	Govt	AHEC/Helena	1393 Hwy 242 South Street	72342	Phillip s	870- 572- 2727	1	Y es
1	4	Upg rade	Helena-W. Helena	UAMS Networ k	Govt	AHEC/UAMS/Delta – Video	119 Hickory Hill Drive	72342	Phillip s	870- 572- 2727	1	Y es
1	4	Upg rade	Searcy	UAMS Networ k	P-N-P	Central Arkansas Hospital	1200 South Main Street	72143	White	501- 278- 3100	1	Y es
1	4	Upg rade	Batesville	UAMS Networ k	P-N-P	UMS/White River Medical Center	1710 Harrison Street	72501	Indepe ndence	870- 262- 1200	1	Y es
1	1	Upg rade	Jonesboro	UAMS Networ k	P-N-P	St. Bernard's Health Care	225 East Jackson Street	72401	Craigh ead	870- 268- 4108	1	Y es
1	1	Upg rade	Jonesboro	UAMS Networ k	Govt	Human Development Center – Jonesboro	4701 Colony Drive	72401	Craigh ead	870- 932- 5230	1	Y es
1	1	Upg rade	Little Rock	UAMS Networ k	Govt	UAMS	4301 West Markham Street	72205	Pulaski	501- 686- 8000	1	Y es
1	1	Upg rade	Little Rock	UAMS Networ k	Govt	AHEC/UAMS CH 1-6	4301 West Markham Street	72205	Pulaski	501- 686- 5260	1	Y es
1	1	Upg rade	Little Rock	UAMS Networ k	Govt	AHEC/UAMS CH19-24	4301 West Markham Street	72205	Pulaski	501- 686- 5260	1	Y es
1	1	Upg rade	West Memphis	UAMS Networ k	P-N-P	Crittenden Memorial Hospital	200 West Tyler	72301	Critten den	870- 735- 1204	1	Y es
1	1 0. 6	Ne w	Hampton	Health Center	P-N-P	Cabun Rural Health Center	403 Hwy 167 South	71744	Calhou n	870- 798- 4064	2	Y es
1	1 0. 6	Ne w	Portland	Health Center	P-N-P	Mainline Health Systems	233 North Main Street	71663	Ashley	870- 737- 2221	2	Y es
1	1 0. 4	Ne w	Carlisle	Health Center	P-N-P	Carlisle Medical Clinic	821 East Park Street	72024	Lonok e	870- 552- 7303	2	Y es

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1	1 0. 4	Ne w	DesArc	Health Center	P-N-P	Des Arc Health Center	405 Hwy 11 North	72040	Prairie	870- 256- 4178	2	Y es
1	1 0. 1	Ne w	Perryville	Health Center	P-N-P	Baptist Health Family Clinic	Plum & Martin Streets	72126	Perryvi lle	501- 889- 5543	2	Y es
1	1 0	Ne w	Fairfield Bay	Health Center	P-N-P	Fairfield Bay Clinic	110 Village Lane	72088	Clebur ne	501- 884- 6898	2	Y es
1	1 0	Ne w	Mc Crory	Health Center	P-N-P	McCrory Health Center	801 Edmonds Street	72101	Woodr uff	870- 731- 5411	2	Y es
1	8	Ne w	Wilmot	Health Center	P-N-P	Wilmot Doctors Clinic	203 McCombs Street	71676	Ashley	870- 473- 2274	2	Y es
1	7. 3	Ne w	Walnut Ridge	Health Center	P-N-P	Community Healthcare Center	3219 North Hwy 67-B	72476	Lawre nce	870- 886- 5507	2	Y es
1	7	Ne w	Brinkley	Health Center	P-N-P	Brinkley Health Center	615 North Main Street	72021	Monro e	870- 734- 1150	2	Y es
1	7	Ne w	Monticello	Health Center	P-N-P	Baptist Health Family Healthcare Center	266 Hwy 278 West	71656	Drew	870- 367- 6293	2	Y es
1	7	Ne w	Dermott	Health Center	P-N-P	Dermott Medical Clinic	604 South Pecan Street	71638	Chicot	870- 538- 3355	2	Y es
1	7	Ne w	Marianna	Health Center	P-N-P	Lee County Cooperative Clinic	530 West Atkins Blvd.	72360	Lee	870- 295- 5225	2	Y es
1	7	Ne w	Newport	Health Center	P-N-P	Newport Medical Center	1507 North Pecan	72112	Jackso n	870- 523- 3643	2	Y es
1	5	Ne w	Amity	Health Center	P-N-P	Amity Clinic	329 North Hill Street	71921	Clark	870- 342- 5606	2	Y es
1	5	Ne w	Bald Knob	Health Center	P-N-P	Bald Knob Medical Clinic	2802 Hwy 367 North	72010	White	501- 724- 6207	2	Y es
1	5	Ne w	Bearden	Health Center	P-N-P	Bearden Health Center	Second & School Street	71720	Ouachi ta	870- 687- 3637	2	Y es
1	3	Ne w	Altheimer	Health Center	P-N-P	Altheimer Clinic	309 South Edine	72004	Jeffers on	870- 766- 8411	2	Y es
1	2	Ne w	Parkin	Health Center	P-N-P	Parkin Medical Clinic	1740 Church Steet	72373	Cross	870- 755- 2234	2	Y es
1	1	Ne w	College Station	Health Center	P-N-P	College Station Health Clinic	4206 Frazier Pike	72053	Pulaski	501- 490- 2440	2	Y es
1	1	Ne w	Little Rock	Health Center	P-N-P	Open Hands Clinic	1225 Martin Luther King Blvd.	72202	Pulaski	501- 244- 2121	2	Y es
1	1	Ne w	North Little Rock	Primar y	P-N-P	Community Health Centers of Arkansas	420 West Fourth, Suite A	72114	Pulaski	501- 374- 8225	2	Y es
1	1 0. 6	Upg rade	Hampton	DHHS Clinic	Govt	Calhoun County Health Unit – Hampton	1119 Prestress Street	71744	Calhou n	870- 798- 2808	3	Y es
1	1 0. 6	Ne w	Clarendon	Health Center	P-N-P	Mid-Delta Health Systems	401 Midland Street	72039	Monro e	870- 747- 3381	3	Y es

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
1	1 0. 5	Upg rade	Salem	DHHS Clinic	Govt	Fulton County Health Unit – Salem	510 South Main Street	72576	Fulton	870- 895- 3300	3	Y es
1	1 0. 4	Upg rade	Des Arc	DHHS Clinic	Govt	Prairie County Health Unit – Des Arc	214 Main Street	72040	Prairie	870- 256- 4430	3	Y es
1	1 0. 2	Upg rade	Star City	DHHS Clinic	Govt	Lincoln County Health Unit – Star City	101 West Wiley Street	71667	Lincol n	870- 628- 5121	3	Y es
1	1 0	Upg rade	Augusta	DHHS Clinic	Govt	Woodruff County Health Unit – Augusta	623 North Ninth Street	72006	Woodr uff	870- 347- 5061	3	Y es
1	1 0	Upg rade	Clinton	DHHS Clinic	Govt	Van Buren County Health Unit- Clinton	526 Quality Drive	72031	Van Buren	501- 745- 2485	3	Y es
1	1 0	Upg rade	Marshall	DHHS Clinic	Govt	Searcy County Health Unit – Marshall	742 Airport Road	72650	Searcy	870- 448- 3374	3	Y es
1	1 0	Upg rade	Melbourne	DHHS Clinic	Govt	Izard County Health Unit – Melbourne	1015 Haley Street	72556	Izard	870- 368- 7790	3	Y es
1	1 0	Upg rade	Mountain Home	DHHS Clinic	Govt	Baxter County Health Unit – Mountain Home	206 Bucher Street	72653	Baxter	870- 425- 3072	3	Y es
2	1 0	Upg rade	Mountain View	DHHS Clinic	Govt	Stone County Health Unit – Mountain View	204 Whitfield Street	72560	Stone	870- 269- 3308	3	Y es
2	1 0	Ne w	Augusta	Health Center	P-N-P	White River Rural Health Center	623 North Ninth Street	72006	Woodr uff	870- 347- 2508	3	Y es
2	1 0	Ne w	Cotton Plant	Health Center	P-N-P	Cotton Plant Medical & Dental Clinic	125 Oak Street	72036	Woodr uff	870- 459- 3588	3	Y es
2	9	Ne w	Lepanto	Health Center	P-N-P	Lepanto Family Medical Center	102 West Broad Street	72354	Poinset t	870- 475- 2977	3	Y es
2	8	Upg rade	Texarkana	DHHS Clinic	Govt	Miller County Health Unit – Texarkana	503 Walnut Street	71854	Miller	870- 773- 2108	3	Y es
2	8	Ne w	Fountain Hill	Health Center	P-N-P	Fountain Hill Mainline Clinic	127 North Hickory	71642	Ashley	870- 853- 9993	3	Y es
2	8	Ne w	Swifton	Health Center	P-N-P	Swifton Medical Center	300 East Main Street	72471	Jackso n	870- 485- 2234	3	Y es
2	7. 4	Upg rade	Osceola	DHHS Clinic	Govt	Mississippi County Health Unit- Osceola	720 West Lee Street	72370	Mississ ippi	870- 563- 2521	3	Y es
2	7. 4	Upg rade	Wynne	DHHS Clinic	Govt	Cross County Health Unit – Wynne	704 Canal Street	72396	Cross	870- 238- 2101	3	Y es
2	7. 4	Upg rade	Lake Village	DHHS Clinic	Govt	Chicot County Health Unit- Lake Village	1742 Hwys 65 & 82 South	71653	Chicot	870- 265- 2236	3	Y es
2	7. 4	Ne w	Wynne	Health Center	P-N-P	Wynne Health Center	611 East Julia	72396	Cross	870- 238- 0377	3	Y es
2	7. 3	Upg rade	Marked Tree	DHHS Clinic	Govt	Poinsett County Health Unit – Marked Tree	102 Liberty Street	72365	Poinset t	870- 358- 3615	3	Y es
2	7. 3	Upg rade	Trumann	DHHS Clinic	Govt	Poinsett County Health Unit – Trumann	1204 West Main Street	72472	Poinset t	870- 483- 5761	3	Y es

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
2	7. 3	Upg rade	Walnut Ridge	DHHS Clinic	Govt	Lawrence County Health Unit – Walnut Ridge	1050 West Free Street	72476	Lawre nce	870- 886- 3201	3	Y es
2	7. 3	Ne w	Walnut Ridge	Health Center	P-N-P	Lawrence Area Healthcare	1053 Free Street	72476	Lawre nce	870- 886- 5507	3	Y es
2	7	Upg rade	Booneville	DHHS Clinic	Govt	Logan County Health Unit- Booneville	721 West First Street	72927	Logan	479- 675- 2593	3	Y es
2	7	Upg rade	Brinkley	DHHS Clinic	Govt	Monroe County Health Unit – Brinkley	306 West King Drive	72021	Monro e	870- 734- 1461	3	Y es
2	7	Upg rade	Corning	DHHS Clinic	Govt	Clay County Health Unit – Corning	301 North Missouri #8	72422	Clay	870- 857- 6281	3	Y es
2	7	Upg rade	Crossett	DHHS Clinic	Govt	Ashley County Health Unit – Crossett	1300 West Fifth Avenue	71635	Ashley	870- 364- 2115	3	Y es
2	7	Upg rade	Dermott	DHHS Clinic	Govt	Chicot County Health Unit- Dermott	600 Pecan	71638	Chicot	870- 538- 3336	3	Y es
2	7	Upg rade	DeWitt	DHHS Clinic	Govt	Arkansas County Health Unit – DeWitt	1616 South Madison	72042	Arkans as	870- 946- 2934	3	Y es
2	7	Upg rade	Eudora	DHHS Clinic	Govt	Chicot County Health Unit- Eudora	2132 Hwy 65 North	71640	Chicot	870- 355- 2278	3	Y es
2	7	Upg rade	Hamburg	DHHS Clinic	Govt	Ashley County Health Unit – Hamburg	401 North Cherry Street	71646	Ashley	870- 853- 5525	3	Y es
2	7	Upg rade	McGehee	DHHS Clinic	Govt	Desha County Health Unit- McGehee	100 East Oak Street	71654	Desha	870- 222- 6173	3	Y es
2	7	Upg rade	Monticello	DHHS Clinic	Govt	Drew County Health Unit – Monticello	940 Scogin Drive	71655	Drew	870- 367- 6234	3	Y es
2	7	Upg rade	Newport	DHHS Clinic	Govt	Jackson County Health Unit – Newport	1505 North Pecan Street	72212	Jackso n	870- 523- 8968	3	Y es
2	7	Upg rade	Pocahontas	DHHS Clinic	Govt	Randolph County Health Unit – Pocahontas	1304 Pace Road	72455	Randol ph	870- 892- 5239	3	Y es
2	7	Upg rade	Stuttgart	DHHS Clinic	Govt	Arkansas County Health Unit – Stuttgart	1602 North Buerkle Street	72160	Arkans as	870- 673- 1609	3	Y es
2	7	Upg rade	Dumas	DHHS Clinic	Govt	Desha County Health Unit- Dumas	761 Hwy 65 South	71639	Desha	870- 382- 2377	3	Y es
2	7	Upg rade	Fordyce	DHHS Clinic	Govt	Dallas County Health Unit – Fordyce	201 North Spring Street	71742	Dallas	870- 352- 7197	3	Y es
2	7	Upg rade	Marianna	DHHS Clinic	Govt	Lee County Health Unit – Marianna	151 North Hickory Street	72360	Lee	870- 295- 2400	3	Y es
2	7	Upg rade	Piggott	DHHS Clinic	Govt	Clay County Health Unit – Piggott	1009 South Garfield	72454	Clay	870- 857- 6281	3	Y es
2	7	Upg rade	Warren	DHHS Clinic	Govt	Bradley County Health Unit – Warren	208 Bragg Street	71671	Bradle y	870- 226- 8440	3	Y es
2	7	Ne w	Corning	Health Center	P-N-P	Corning Area HealthCare	1300 Creason Road	72422	Clay	870- 857- 3399	3	Y es

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
2	7	Ne w	Dermott	Health Center	P-N-P	Dermott Dental Clinic	115 East Peddiscord Street	71638	Chicot	870- 538- 9720	3	Y es
2	7	Ne w	Eudora	Health Center	P-N-P	Eudora Medical Clinic	579 East Beoff Street	71640	Chicot	870- 355- 2512	3	Y es
2	7	Ne w	Hazen	Health Center	P-N-P	Hazen Medical Clinic	100 East Front Street	72064	Prairie	870- 255- 3696	3	Y es
2	7	Ne w	Pocahontas	Health Center	P-N-P	Pocahontas Family Medical Center	141 Betty Drive	72455	Randol ph	870- 892- 9949	3	Y es
2	5	Upg rade	Harrison	DHHS Clinic	Govt	Boone County Health Unit – Harrison	1622 Campus Drive	72601	Boone	870- 743- 5244	3	Y es
2	5	Ne w	Kensett	Health Center	P-N-P	W.R. Medical Services Clinic	606 Wilber D. Mills Avenue	72082	White	501- 742- 5697	3	Y es
2	5	Ne w	Strong	Health Center	P-N-P	Strong Clinic	253 South Concord	71765	Union	870- 797- 7620	3	Y es
2	5	Ne w	Wabash	Health Center	P-N-P	Lakeview Area Clinic	Old Town Lake Hwy 44	72389	Phillip s	870- 827- 3201	3	Y es
2	4	Upg rade	Batesville	DHHS Clinic	Govt	Independence County Health UnitBatesville	121 Weaver Avenue	72502	Indepe ndence	870- 793- 8848	3	Y es
2	4	Upg rade	Blytheville	DHHS Clinic	Govt	Mississippi County Health Unit- Blytheville	1299 North 10 th Street	72316	Mississ ippi	870- 763- 7064	3	Y es
2	4	Upg rade	El Dorado	DHHS Clinic	Govt	Union County Health Unit – El Dorado	301 American Road	71730	Union	870- 863- 5101	3	Y es
2	4	Upg rade	Forrest City	DHHS Clinic	Govt	St. Francis County Health Unit – Forrest City	413 North Division	72335	St. Francis	870- 633- 1340	3	Y es
2	4	Upg rade	Helena – West Helena	DHHS Clinic	Govt	PhillipsCounty Health Unit – West Helena	110 Shirley Hicks Drive	72390	Phillip s	870- 572- 9028	3	Y es
2	4	Upg rade	Paragould	DHHS Clinic	Govt	Greene County Health Unit – Paragould	801 Goldsmith Road	72450	Greene	870- 236- 7782	3	Y es
2	4	Upg rade	Searcy	DHHS Clinic	Govt	White County Health Unit – Searcy	112 Brantly Road	72143	White	501- 268- 6102	3	Y es
2	4	Upg rade	Camden	DHHS Clinic	Govt	Ouachita County Health Unit- Camden	740 California Avenue, NW	71701	Ouachi ta	870- 836- 7395	3	Y es
2	4	Ne w	Heber Springs	Health Center	P-N-P	Heber Springs Health Center	309 Southridge Blvd. Suite A	72543	Clebur ne	501- 362- 9426	3	Y es
2	4	Ne w	Madison	Health Center	P-N-P	Madison Satellite Clinic	First & Washington Streets	72359	St. Francis	870- 821- 0165	3	Y es
2	2	Upg rade	Beebe	DHHS Clinic	Govt	White County Health Unit – Beebe	306 Gum Street	72012	White	501- 882- 5128	3	Y es
2	2	Upg rade	Earle	DHHS Clinic	Govt	Crittenden Co. Health Unit – Earle	841 Ruth Street	72331	Critten den	870- 792- 7393	3	Y es
2	2	Upg rade	Harrisburg	DHHS Clinic	Govt	Poinsett County Health Unit – Harrisburg	119 North Main Street	72432	Poinset t	870- 578-	3	Y es

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
										4480		
		Upg		DHHS		St. Francis County Health	503 Love		St.	870- 339-		Y
2	2	rade	Hughes	Clinic	Govt	Unit – Hughes	Street	72348	Francis	3206	3	es
		Upg		DHHS		Lonoke County Health Unit	306 North		Lonok	501- 676-		Y
2	2	rade	Lonoke	Clinic	Govt	– Lonoke	Center Street 409 East	72086	e	2268 870-	3	es
	2	Upg	ъ.	DHHS		Cleveland County Health	Magnolia	51655	Clevel	325-		Y
2	2	rade	Rison	Clinic	Govt	Unit – Rison	Street	71655	and	6311 870-	3	es
	2	Upg	G1 : 1	DHHS	G .	Grant County Health Unit –	700 East	70150	G .	942-	1	Y
2	2	rade	Sheridan	Clinic	Govt	Sheridan	Center Street	72150	Grant	3157 870-	3	es
	2	Ne	TT 1	Health	DND	H 1 C 11' C1' '	503 South	70240	St.	339-	1	Y
2	2	W	Hughes	Center	P-N-P	Hughes Satellite Clinic	Broadway	72348	Francis	4181 501-	3	es
		Ne		Health			112 West		Jeffers	397-		Y
2	2	W	Redfield	Center	P-N-P	Redfield Clinic	River Road 505	72132	on	2261 870-	3	es
		Ne		Health			Sycamore		Clevel	325-		Y
2	2	W	Rison	Center	P-N-P	Rison Clinic	Street	71655	and	6255	3	es
		Upg		DHHS		Craighead County Health	611 E. Washington		Craigh	870- 933-		Y
2	1	rade	Jonesboro	Clinic	Govt	Unit – Jonesboro	Ave., Suite B	72401	ead	4585	3	es
		Upg		DHHS			4815 West			501- 661-		Y
2	1	rade	Little Rock	Clinic	Govt	Div of Health – Auditorium	Markham	72205	Pulaski	2000	3	es
				D.11110		D. 477 11 D	5800 W. 10 th			501-		
2	1	Upg rade	Little Rock	DHHS Clinic	Govt	Div of Health – Freeway Boardroom	Street; Ste 907	72204	Pulaski	661- 2000	3	Y es
										501-		
2	1	Upg rade	Little Rock	DHHS Clinic	Govt	Div of Health – Laboratory Training Room	4815 West Markham	72205	Pulaski	661- 2000	3	Y es
	1	rade	Little Rock	Cinne	Govi	Training Room	Warkham	72203	Tutuski	501-	3	Co
2	1	Upg	North	DHHS	Ct	Pulaski County Health Unit – North Little Rock	2800 Willow	72114	D11-:	791-	3	Y
2	1	rade	Little Rock	Clinic	Govt	– North Little Rock	Street 901 North	72114	Pulaski	8551 870-	3	es
		Upg	West	DHHS		Crittenden Co. Health Unit	Seventh		Critten	735-		Y
2	1	rade	Memphis	Clinic	Govt	- West Memphis	Street	72301	den	4334 501-	3	es
		Upg		DHHS		Division of Health –	5800 W. 10 th			661-		Y
2	1	rade	Little Rock	Clinic	Govt	Freeway WIC	Street	72204	Pulaski	2000	3	es
		Upg		DHHS		Pulaski County Health Unit	3915 West			501- 280-		Y
2	1	rade	Little Rock	Clinic	Govt	– Central	Eighth Street	72204	Pulaski	3100	3	es
		Upg		DHHS		Jefferson County Health	2306 Rike		Jeffers	870- 535-		Y
2	1	rade	Pine Bluff	Clinic	Govt	Unit – Pine Bluff	Drive	71611	on	2142	3	es
		NT-		Haghth.		Ionachana Eas-th- II14	1530 North		Cmo! -1-	870-		17
2	1	Ne w	Jonesboro	Health Center	P-N-P	Jonesboro Family Health Center	Church Street	72401	Craigh ead	802- 3586	3	Y es
							2601	-		870-		
2	1	Ne w	Jonesboro	Health Center	P-N-P	Jonesboro Specialty Care Center	Southwest Square	72401	Craigh ead	802- 3511	3	Y es
	-	**	2011200010		1 1			, 2 101		501-		
2	1	Ne	Little Deel-	Health	P-N-P	Little Book Clinic	1522 West 10 th Street	72202	Dulastei	376- 1295	3	Y
	1	W	Little Rock	Center	F-IN-F	Little Rock Clinic	10 Street	72202	Pulaski	870-	ی	es
_		Ne	D: D1 00	Health	D.V.	Jefferson Comprehensive	Tennessee	71.601	Jeffers	543-	_	Y
2	1	W Ne	Pine Bluff West	Center Health	P-N-P	Care System East Arkansas Delta AIDS	Street 210 North	71601	on Critten	2380 870-	3	es Y
2	1	w	Memphis	Center	P-N-P	Care Center	Sixth Street	72301	den	735-	3	es

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
										3291		
2	1	Ne w	West Memphis	Health Center	P-N-P	East Arkansas Family Health Center	215 East Bond	72301	Critten den	870- 735- 3842	3	Y es
2	1	Ne w	Little Rock	Primar y	P-N-P	Arkansas Center for Health Improvement	1401 West Capitol, Suite 300	72201	Pulaski	501- 526225 2	3	Y es
2	1	Ne w	Little Rock	Primar y	P-N-P	Arkansas Foundation for Medical Care Arkansas Research &	401 West Capitol, Suite 508 4301 West	72201	Pulaski	501- 375- 5700 479-	3	Y es
2	1	Ne w	Little Rock	Primar y	Govt	Educational Optical Network	Markham Street	72205	Pulaski	575- 2000	3	Y es
2		Upg rade	Mobile #1	DHHS Clinic	Govt	Mobile #1 Health Unit	`	`	Pulaski		3	Y es
2		Upg rade	Mobile #2	DHHS Clinic	Govt	Mobile #2 Health Unit	`	`	Pulaski		3	Y es
2		Upg rade	Mobile #3	DHHS Clinic	Govt	Mobile #3 Health Unit	`	`	Pulaski		3	Y es
2	7	Ne w	Monticello	Mental Health	P-N-P	Delta Counseling Associates	790 Roberts Drive	71655	Drew	870- 367- 9732	4	Y es
2	4	Ne w	Batesville	Mental Health	P-N-P	Health Resources of Arkanas	25 Gap Road	72503	Indepe ndence	870- 793- 8900	4	Y es
2	4	Ne w	Forrest City	Mental Health	P-N-P	Counseling Services of East Arkansas	4451 North Washington	72335	St. Francis	870- 630- 3800	4	Y es
2	4	Ne w	El Dorado	Mental Health	P-N-P	South Arkansas Regional Health Center	715 North College Avenue	71730	Union	870- 862- 7921	4	Y es
2	1	Ne w	Benton	Mental Health	P-N-P	Counseling Clinic	307 East Sevier Street	72015	Saline	501- 315- 4224	4	Y es
2	1	Ne w	Jonesboro	Mental Health	P-N-P	Mid-South Health Systems	2707 Browns Lane	72401	Craigh ead	870- 972- 4000	4	Y es
2	1	Ne w	Jonesboro	Mental Health	P-N-P	St. Bernard's Behavioral Health	2712 East Jonesboro	72301	Critten den	870- 932- 2800	4	Y es
2	1	Ne w	Little Rock	Mental Health	Govt	Arkansas State Hospital	4301 West Markham Street	72205	Pulaski	501- 686- 9032	4	Y es
2	1	Ne w	Maumelle	Mental Health	P-N-P	Methodist Behavioral Hospital	1601 Murphy Drive	72113	Pulaski	501- 803- 3388	4	Y es
2	1	Ne w	Pine Bluff	Mental Health	P-N-P	Southeast Arkanas Behavioral Healthcare	2500 Rike Drive	71613	Jeffers on	870- 534- 1834	4	Y es
2	1	Ne w	Little Rock	Mental Health	P-N-P	Little Rock Community Mental Health	4400 Shuffield Drive	72225	Pulaski	501- 686- 9301	4	Y es
2	1	Ne w	Little Rock	Mental Health	P-N-P	Professional Counseling Associates	650 S.Shacklefor d, Suite 217	72211	Pulaski	501- 221- 1843	4	Y es
2	7	Ne w	Dermott	Nursin g School	P-N-P	Baptist Health School of Nursing	700 West Gaines	71638	Chicot	870- 538- 5061	5	Y es
		Ne		Nursin		Baptist Health School of	11900 Col.Glenn Rd., Ste			501- 227-		Y
2	1	W	Little Rock	School	P-N-P	Nursing	1000	72210	Pulaski	8478	5	es
2	7	Ne	Stuttgart	Therap	P-N-P	Baptist Health Therapy	2118 S.	72160	Arkans	870-	6	Y

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
		W		у		Center	Buerkle		as	673- 8775		es
2	7	Upg rade	Warren	UAMS Networ k	Govt	Human Development Center – Warren	1 Center Circle	71671	Bradle y	870- 226- 6774	6	Y es
2	5	Upg rade	Marvell	UAMS Networ k	Govt	Marvel Clinic – video	1008 Main Street	72366	Phillip s	870- 829- 2521	6	Y es
2	4. 2	Upg rade	Conway	UAMS Networ k	Govt	Human Development Center – Conway	150 East Siebenmorga n Road	72034	Faulkn er	501- 329- 6851	6	N o
2	4	Upg rade	Camden	Family Clinic	P-N-P	Ouachita Velley Family Clinic	353 Cash Road	71701	Ouachi ta	870- 836- 8101	6	Y es
2	4	Ne w	Searcy	Therap y	P-N-P	Baptist Health Therapy Center	720 Marion, Suite 102	72143	White	501- 268- 3232	6	Y es
2	4	Upg rade	El Dorado	UAMS Networ k	Govt	AHEC/El Dorado	460 W Oak Street	71731	Union	870- 862- 2489	6	Y es
2	4	Upg rade	Helena-W. Helena	UAMS Networ k	P-N-P	Mid-Delta Community Consortium	120 South 7 th Street	72342	Phillip s	870- 572- 5518	6	Y es
2	2	Upg rade	Beebe	Family Clinic	P-N-P	Beebe Family Clinic -	47 Hwy 64 West	72012	White	501- 882- 3388	6	Y es
2	2	Upg rade	England	Family Clinic	P-N-P	Baptist Health Family Clinic – England	221 NE 2 nd Street	72046	Lonok e	501- 842- 3819	6	Y es
2	2	Upg rade	Lonoke	Family Clinic	P-N-P	Anderson Medical Clinic	1310 North Center Street	72086	Lonok e	501- 676- 5123	6	Y es
2	2	Upg rade	Sheridan	Family Clinic	P-N-P	Paulk Family Clinic	1110 West Vine Street	72150	Grant	870- 942- 5155	6	Y es
2	2	Ne w	Lonoke	Therap y	P-N-P	Baptist Health Therapy Center	1306 North Center	72086	Lonok e	501- 676- 5123	6	Y es
2	1	Upg rade	Cabot	Family Clinic	P-N-P	Baptist Health Family Clinic – Cabot	205 Westport Drive	72023	Lonok e	501- 843- 6585	6	Y es
2	1	Ne w	Cabot	Therap y	P-N-P	Baptist Health Therapy Center	North First Street	72023	Lonok e	501- 843- 9893	6	Y es
2	1	Upg rade	Alexander	UAMS Networ k	Govt	Human Development Center – Alexander	14701 Hwy 111 South	72002	Pulaski	501- 847- 3506	6	Y es
2	1	Upg rade	Jonesboro	UAMS Networ k UAMS	Govt	AHEC/Jonesboro	223 East Jackson Street 4010	72401	Craigh ead	870- 972- 9603	6	Y es
2	1	Upg rade	Pine Bluff	Networ k UAMS	Govt	AHEC/Pine Bluff	Mulberry Drive 4010	72454	Jeffers on	870- 541- 7611 870-	6	Y es
2	1	Upg rade	Pine Bluff	Networ k	Govt	AHEC/Pine Bluff	Mulberry Drive 4301 West	72454	Jeffers on	541- 7611	6	Y es
3	1	Upg rade	Little Rock	UAMS Networ k	Govt	UAMS/NRS Video Cir	Markham Street	72205	Pulaski	501- 686- 8000	6	Y es
3	1	Upg rade	Little Rock	UAMS Networ k	Govt	UAMS/NRS Video Cir	4301 West Markham Street	72205	Pulaski	501- 686- 8000	6	Y es
3	1	Upg	Murfreesb	At Risk	Govt	Pike County Hospital	315 East 13 th	71958	Pike	870-	9	N

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
	0. 6	rade	oro	Hospita 1			Street			285- 3182		0
3	1 0. 5	Upg rade	Danville	At Risk Hospita l	P-N-P	Chambers Memorial Hospital	Hwy 10 at Detroit Street	72833	Yell	479- 495- 6218	9	N o
3	1 0	Upg rade	Clinton	Critical Access Hosp.	P-N-P	Ozark Health Medical Center	801 West River Street	72031	Van Buren	501- 745- 7000	9	N o
3	1 0	Upg rade	Eureka Springs	Critical Access Hosp.	Govt	Eureka Springs Hospital	24 Norris Street	72632	Carroll	479- 253- 7400	9	N o
3	1 0	Upg rade	Clinton	UAMS Networ k	P-N-P	Ozark Health Medical Center	2500 Hwy 65 South	72031	Van Buren	501- 745- 7000	9	N o
3	7. 4	Upg rade	Morrilton	Critical Access Hosp.	P-N-P	St. Anthony's Hospital	Four Hospital Drive	72653	Conwa y	501- 977- 2413	9	N o
3	7. 4	Upg rade	Waldron	Critical Access Hosp.	P-N-P	Mercy Hospital – Scott County	895 West 6 th Street	72958	Scott	479- 637- 4135	9	N o
3	7. 3	Upg rade	Ashdown	Critical Access Hosp.	Govt	Little River Memorial Hospital	451 West Locke Street	71822	Little River	870- 898- 4131	9	N o
3	7. 3	Upg rade	Ozark	Critical Access Hosp.	Govt	Mercy Hospital – Turner Memorial	801 West River Street	72949	Frankli n	479- 667- 0834	9	N o
3	7. 3	Ne w	Malvern	Health Center	P-N-P	Baptist Health Family Clinic	1002 Schneider, Suite 104	72104	Hot Spring	870- 367- 6293	9	N o
3	7	Upg rade	Mena	At Risk Hospita 1	Govt	Mena Regional Health System	311 North Morrow Street	71953	Polk	479- 394- 6100	9	N o
3	7	Upg rade	Berryville	Critical Access Hosp.	P-N-P	St. John's Hospital	214 Carter Street	72616	Carroll	870- 423- 5230	9	N o
3	7	Upg rade	Booneville	Critical Access Hosp.	Govt	Booneville Community Hospital	880 West Main Street	72927	Logan	479- 675- 2000	9	N o
3	7	Upg rade	Nashville	Critical Access Hosp.	P-N-P	Howard Memorial Hospital	300 West Leslie	71852	Howar d	870- 845- 8104	9	N o
3	7	Upg rade	Paris	Critical Access Hosp.	Govt	Mercy Hospital – North Logan County	500 East Academy	72855	Logan	479- 963- 6101	9	N o
3	7	Upg rade	Mena	UAMS Networ k	Govt	Mena Regional Health System	311 North Morgan Street	71953	Polk	479- 394- 6100	9	N o
3	5	Upg rade	Harrison	UAMS Networ k	P-N-P	North Arkansas Medical Center	620 North Willow Street	72601	Boone	870- 365- 2002	9	N o
3	4	Upg rade	Arkadelphi a	Critical Access Hosp.	P-N-P	Baptist Medical Center – Arkadelphia	3050 Twin Rivers Drive	71923	Clark	870- 245- 2622	9	N o
3	4	Upg rade	Dardanelle	Critical Access Hosp.	Govt	Dardanelle Hospital	200 North Third Stret	72834	Yell	479- 229- 4677	9	N o
3	4	Upg rade	Heber Springs	Critical Access Hosp.	P-N-P	Baptist Medical Center – Heber Springs	2319 Hwy 110 West	72543	Clebur ne	501- 206- 3221	9	N o
3	1	Ne w	Springdale	Health Center	P-N-P	Community Clinic at St Francis House	614 East Emma	72762	Washi ngton	479- 751- 7417	9	N o
3	1	Upg	Ash Flat	DHHS	Govt	Sharp County Health Unit	724 Ash Flat	72513	Sharp	870-	1	N

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
	0. 6	rade		Clinic		– Ash Flat	Drive			994- 7364	0	0
3	1 0. 5	Upg rade	Yellville	DHHS Clinic	Govt	Marion County Health Unit – Yellville	707 Hwy 202 West	72687	Marion	870- 449- 4259	1 0	N o
3	1 0. 5	Ne w	Deer	Health Center	P-N-P	Deer Clinic	HC31, Box 310	72628	Newto n	870- 428- 5391	1 0	N o
3	1 0. 5	Ne w	Lewisville	Health Center	P-N-P	Lewisville Family Practice Center	1117 Chestnut Street	71845	Lafaye tte	870- 921- 5781	1 0	N o
3	1 0. 4	Upg rade	Mt Ida	DHHS Clinic	Govt	Montgomery County Health Unit – Mt Ida	346 Lucerne Street	71957	Montg omery	870- 867- 2331	1 0	N o
3	1 0. 2	Ne w	Huntsville	Health Center	P-N-P	Huntsville Clinic	932 North Gaskill Street	72740	Madiso n	479- 738- 5500	1 0	N o
3	1	Ne w	Clinton	Health Center	P-N-P	Clinton Clinic	465 Medical Center Parkway	72031	Van Buren	501- 745- 7888	1 0	N o
3	1	Ne w	Marshall	Health Center	P-N-P	Boson Mountain Rural Health Center	Hwy 27 South	72650	Searcy	870- 448- 3796	1 0	N o
3	8	Ne w	Ratcliff	Health Center	P-N-P	River Valley Primary Health Care	9755 Hwy 22 West	72951	Logan	479- 635- 5300	1 0	N o
3	7. 4	Upg rade	Waldron	DHHS Clinic	Govt	Scott County Health Unit – Waldron	316 Featherston	72958	Scott	479- 637- 2165	1 0	N o
3	7. 3	Upg rade	Malvern	Family Clinic	P-N-P	Baptist Health Family Clinic – Malvern	1002 Schneider, Ste. 104	72104	Hot Spring	501- 337- 9066	1 0	N o
3	7	Upg rade	Mena	DHHS Clinic	Govt	Polk County Health Unit – Mena	702 Hornbeck Street	71953	Polk	479- 394- 2707	1 0	N o
3	7	Upg rade	Paris	DHHS Clinic	Govt	Logan County Health Unit- Paris	150 South Lowder	72855	Logan	479- 963- 6126	1 0	N o
3	7	Ne w	Mena	Health Center	P-N-P	Healthy Connections	404 Seventh Street	71953	Polk	479- 243- 0279	1 0	N o
3	7	Ne w	Mena	Health Center	P-N-P	Western Arkansas Total Community Health	1201 South Mena Street	71953	Polk	479- 437- 3449	1 0	N o
3	4. 2	Upg rade	Conway	DHHS Clinic	Govt	Faulkner County Health Unit- Conway	811 North Creek Drive	72033	Faulkn er	501- 450- 4941	1 0	N o
3	4	Upg rade	Arkadelphi a	DHHS Clinic	Govt	Clark County Health Unit – Arkadelphia	605 South 10 th Street	71923	Clark	870- 246- 4471	1 0	N o
3	4	Upg rade	Russellvill e	DHHS Clinic	Govt	Pope County Health Unit – Russellville	1509 East Main Street, Suite 4	72801	Pope	479- 968- 6004	1 0	N o
3	1	Upg rade	Hot Springs	DHHS Clinic	Govt	Garland County Health Unit – Hot Springs	1425 Malvern Avenue	71901	Garlan d	501- 624- 3394	1 0	N o
3	1	Ne w	Fort Smith	Health Center	P-N-P	Fort Smith Clinic	3202 North Sixth Street	72904	Sebasti an	479- 785- 5700	1 0	N o
3	1	Ne w	Норе	Health Center	P-N-P	Hope Migrant Health Center	205 Smith Road; Suite D	71801	Hemps tead	870- 777- 8420	1 0	N o
3	7	Upg	DeQueen	DHHS	Govt	Sevier County Health Unit	304 North	71832	Sevier	870-	1	N

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
		rade		Clinic		– DeQueen	Fourth Street			642- 2535	1	0
3	7	Upg rade	Nashville	DHHS Clinic	Govt	Howard County Health Unit – Nashville	201 N. Hempstead, Suite 2	71852	Howar d	870- 845- 2208	1	N o
3	1	Upg rade	Benton	DHHS Clinic	Govt	Saline County Health Unit – Benton	1612 Edison Avenue	72015	Saline	501- 303- 5650 479-	1	N o
3	1	Upg rade	Bentonvill e	DHHS Clinic	Govt	Benton County Health Unit- Bentonville	1202 SW 14 th Street	72712	Benton	271- 1055	1	N o
3	1	Upg rade	Fayettevill e	DHHS Clinic	Govt	Washington County Health Unit – Fayetteville	3270 Wimberly Drive	72703	Washi ngton	479- 521- 8181 479-	1	N o
3	1	Upg rade	Fort Smith	DHHS Clinic	Govt	Sebastian County Health Unit – Fort Smith	3112 South 70 th Street	72903	Sebasti an	479- 452- 8600 870-	1	N o
3	1	Upg rade	Норе	DHHS Clinic	Govt	Hempstead County Health Unit – Hope	808 West Fifth Street	71801	Hemps tead	777- 2191 479-	1	N o
3	1	Ne w	Fort Smith	Mental Health	P-N-P	Western Arkansas Counseling & Guidance	3111 North Washington	72903	Sebasti an	452- 6650 501-	1	N o
3	1	Ne w	Hot Springs	Mental Health	P-N-P	Community Counseling Services	505 West Grand	71901	Garlan d	624- 7111	1	N o
3	4. 2	Ne w	Conway	Mental Health	P-N-P	Counseling Associates	350 Salem Road, Suite 1	72032	Faulkn er	501- 327- 4889	1 2	N o
3	1	Ne w	Barling	Mental Health	P-N-P	Vista Health	10301 Mayo Drive	72923	Sebasti an	479- 521- 5731	1 2	N o
3	1	Ne w	Fort Smith	Mental Health	P-N-P	Vista Health – Fort Smith	10301 Mayo Drive	72903	Sebasti an	479- 494- 5700	1 2	N o
3	1	Ne w	Springdale	Mental Health	P-N-P	Ozark Guidance	2400 South 48 th Street	72762	Washi ngton	479- 750- 2020	1 2	N o
3	1	Ne w	Texarkana	Mental Health	P-N-P	Southwest Arkansas Counseling	2904 Arkansas Blvd.	75502	Miller	870- 773- 4655	1 2	N o
3	1	Upg rade	Perryville	Family Clinic	P-N-P	Baptist Health Family Clinic – Perryville	313 West Main Street	72126	Perry	501- 889- 5543	1 4	N o
3	1 0	Ne w	Fairfield Bay	Therap y	P-N-P	Baptist Health Therapy Center	381 Dave Creek Parkway	72088	Clebur ne	501- 206- 2482	1 4	N o
3	7	Upg rade	Booneville	UAMS Networ k	Govt	Human Development Center – Booneville	Hwy 116 South	72927	Logan	479- 675- 2121	1 4	N o
3	4	Upg rade	Arkadelphi a	UAMS Networ k	Govt	Human Development Center – Arkadelphia	#1 Prator Drive	71923	Clark	870- 246- 8011	1 4	N o
3	1	Upg rade	Springdale	UAMS Networ k	Govt	AHEC/Schmeiding Dev Geriatrics	2422 N. Thompson, Suite "B"	72762	Washi ngton	479- 750- 6566	1 4	N o
3	1	Upg rade	Fayettevill e	UAMS Networ k	Govt	AHEC/Fayetteville – video #1	2907 East Joyce Street	72703	Washi ngton	479- 521- 8269	1 4	N o
3	1	Upg rade	Fayettevill e	UAMS Networ k	Govt	AHEC/Fayetteville – video #2	2907 East Joyce Street	72703	Washi ngton	479- 521- 8269	1 4	N o
3	1	Upg	Fort Smith	UAMS	Govt	AHEC/Fort Smith – 384K	612 South	72903	Sebasti	479-	1	N

Phase	RUCA	Stat us	City Name	Provid er Type	Profit Status	Name	Address	Zip Code	County	Phone	Priority Code	Delta
		rade		Networ			12 th Street		an	785-	4	О
				k						2431		
				UAMS						479-		
		Upg		Networ			612 South		Sebasti	785-	1	N
3	1	rade	Fort Smith	k	Govt	AHEC/Forth Smith	12 th Street	72903	an	2431	4	О
				UAMS			2422 N.			479-		
		Upg		Networ			Thompson,		Washi	750-	1	N
3	1	rade	Springdale	k	Govt	AHEC/Geriatrics 384K	Suite "B"	72762	ngton	6566	4	О
				UAMS						479-		
		Upg	Fayettevill	Networ		AHEC/Washington	3215 North		Washi	442-	1	N
3	1	rade	e	k	Govt	Regional – NW Library	Hills Blvd	72703	ngton	1175	4	О

B. For-profit agencies

<u>B.</u>	ror-pre	ofit agencies	<u>S'</u>					
RUC A	Status	City Name	Provider Type	Profit Status	Name	Phone	Priorit y Code	Del ta
7.4	Upgrade	Osceola	Critical Access Hospital	corp	SMC Regional Medical Center- Osceola	870-563-7000	8	Yes
7	Upgrade	Pocahontas	At Risk Hospital	corp	Randolph County Medical Center	870-886-1200	8	Yes
10	New	Marshall	Mental Health	corp	DaySpring of Marshall	870-448-4727	8	Yes
9	New	Imboden	Mental Health	corp	DaySpring of Imboden	870-869-2385	8	Yes
7.3	New	Trumann	Mental Health	corp	DaySpring of Trumann	870-483-7039	8	Yes
7	New	Monticello	Mental Health	corp	DaySpring of Monticello	870-367-2141	8	Yes
7	New	Newport	Mental Health	corp	DaySpring of Newport	870-217-0771	8	Yes
7	Upgrade	Newport	UAMS Network	corp	Harris Hospital	870-523-8911	8	Yes
4	New	El Dorado	Mental Health	corp	DaySpring of El Dorado	870-863-4611	8	Yes
4	Upgrade	El Dorado	UAMS Network	corp	Medical Center of South Arkansas	870-863-2000	8	Yes
4	New	Helena-W. Helena	Mental Health	corp	DaySpring of Helena	870-338-2712	8	Yes
4	Upgrade	Helena-W. Helena	UAMS Network	corp	Helena Regional Medical Center	870-338-5800	8	Yes
4	Upgrade	Helena-W. Helena	UAMS Network	corp	Helena Regional Medical Center - 384K	870-338-5800	8	Yes
4	Upgrade	Helena-W. Helena	UAMS Network	corp	Helena Regional Medical Center – Video	870-338-5800	8	Yes
4	Upgrade	Helena-W. Helena	UAMS Network	corp	Helena Regional Medical Center – Video	870-338-5800	8	Yes
4	New	Paragould	Mental Health	corp	DaySpring of Paragould	870-240-0671	8	Yes
1	New	Jonesboro	Other Hospital	corp	Surgical Hospital of Jonesboro	870-336-1100	8	Yes
1	New	Jonesboro	Mental Health	corp	DaySpring of Jonesboro	870-934-9800	8	Yes
1	New	Little Rock	Mental Health	corp	Pinnacle Pointe Hosp	501-223-3322	8	Yes
1	New	Marion	Mental Health	corp	DaySpring of Marion	870-739-1700	8	Yes
1	New	Sherwood	Rehabilitation	corp	St. Vincent Rehabilitation Hospital	501-834-1800	8	Yes
7	Upgrade	DeQueen	Critical Access Hospital	corp	DeQueen Regional Medical Center	870-584-4111	16	No
7.4	New	Morrilton	Mental Health	corp	DaySpring of Morrilton	501-208-5911	16	No
7	New	Clarksville	Mental Health	corp	DaySpring of Clarksville	479-754-5511	16	No

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4	New	Arkadelphia	Mental Health	corp	DaySpring of Arkadelphis	870-230-8364	16	No
4	New	Magnolia	Mental Health	corp	DaySpring of Magnolia	870-234-0495	16	No
4	New	Russellville	Mental Health	corp	DaySpring of Russellville	479-967-4673	16	No
1	New	Benton	Mental Health	corp	Rivendell Behavioral	501-316-1255	16	No
1	New	Fayetteville	Mental Health	corp	Vista Health	479-521-5731	16	No
1	Upgrade	Fayetteville	UAMS Network	corp	Washington Regional Medical Center	479-463-1000	16	No
1	New	Hot Springs	Mental Health	corp	DaySpring of Hot Springs	501-609-0400	16	No
1	Upgrade	Hot Springs	UAMS Network	corp	National Park Medical Center	501-321-1000	16	No
1	Upgrade	Johnson	UAMS Network	corp	Willow Creek Women's Center – ATM	479-684-3000	16	No
1	New	Rogers	Mental Health	corp	DaySpring of Rogers	479-631-9996	16	No
1	New	Springdale	Mental Health	corp	DaySpring of Springdale	479-872-5580	16	No
1	Upgrade	Springdale	UAMS Network	corp	Northwest Family Medical Center	479-751-5711	16	No

Appendix C Budget & Justification

On-site router installation (public) \$21,500 \$43,200 \$34,000 \$0 \$0 On-site router installation (Baptist Health) \$900 \$3,900 \$2,600 \$0 \$0 On-site router maintenance yearly (public) \$20,200 \$61,200 \$91,200 \$95,760 \$100,548 On-site router maintenance yearly (Baptist Health) \$830 \$4,600 \$7,100 \$7,455 \$7,828 10Gb router \$100,000 \$0 \$0 \$0 \$0 \$0 \$0 10Gb router and firewall maintenance \$50,000 \$	UAMS: R	ural Health (Care Pilot Pi	rogram Budg	get	
ELIGIBLE ITEMS	Yellow cell sha	ding denotes	costs covered	d by match fu	inding.	
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On-site router first cost (Baptist Health)				·	·	•
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Circuit vendor Installation (Baptist					·	\$0
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	·					\$24,000
					•	\$120,000
	*					\$0
						\$0
					·	\$118,000

year 1)					
50M OC3 NTWK Connectivity to Baptist Health Systems	\$24,000	\$48,000	\$48,000	\$48,000	\$48,000
Total Eligible Costs	\$2,396,230	\$2,658,758	\$2,177,095	\$2,817,169	\$2,838,137
Year 1 and 2		\$5,054,988			
Required 15% Match	\$359,435	\$398,814			
Designated as Match	\$430,000	\$407,300			

Budget Justification

Item Name	
Equipment	
7606 Video router (at MCU)	est. cost of video router required to interface the MCU
7606 Maintenance 24x7x4 yearly	est. maintenance for video router
On-site router first cost (public)	est. cost of the router to connect the individual health LANs to the WAN
On-site router first cost (non-public)	est. cost of the router to connect the individual health LANs to the WAN
On-site router installation (public)	est. cost to have the site routers installed
On-site router installation (non-public)	est. cost to have the site routers installed
On-site router maintenance yearly (public)	est. vendor maintenance contract cost for the site routers
On-site router maintenance yearly (non-public) 10Gb router	est. vendor maintenance contract cost for the site routers est. cost of the router to connect to ARE_ON
10Gb router 10Gb capable firewall	est. cost of the forevall to connect to ARE_ON
10Gb capable filewall 10Gb router and firewall maintenance	est. cost of the firewall to connect to ARE_ON est. cost of router and firewall to connect to ARE ON
DWDM equipment to light fiber	est. cost of fourer and frewari to connect to ARE_ON est. cost of fiber transport equipment to connect to ARE_ON
DWDM equipment maintenance	est. cost of fiber transport equipment to connect to ARE_ON est. cost of fiber transport equipment maintenance to connect to ARE_ON
MGC100 MCU (Polycom) w/year 1 maintenance	est. purchase of the equivalent of a Polycom MGC100 MCU & 1 year maint.
MCU maintenance starting year 2	est. vendor maintenance contract cost for MCU
3825 router (non-public)	est. cost of router at Baptist Health Systems
3825 Maintenance 24x7x4 yearly	est. maintenance of router at Baptist Health Systems
Contractual	-
Internet I (dedicated)	est. Internet 1 cost including transport
State backbone yearly (public)	est. cost to connect sites to a common backbone
Backbone yearly (non-public)	est. cost to connect sites to a common backbone
1.5 ATM yearly (public network)	est. cost to connect health sites at 1.5M
1.5 ATM yearly (non-public)	est. cost to connect health sites at 1.5M
3M IMA yearly (public)	est. cost to connect health sites at 3M
3M IMA yearly (non-public)	est. cost to connect health sites at 3M
Circuit vendor Installation (public)	est. cost for vendor circuit installations
Circuit vendor Installation (non-public)	est. cost for vendor circuit installations
Internet II	est. of Internet II fee
Internet II transport	est. of the cost to connect health network to Internet II backbone
Network design	est. contractual services for project design
Project Management	est. contractual services for project management

2 ATM OC3s to video router (1 in year 1)	est. cost to connect MCU site to the common backbone
50M OC3 Connectivity to Baptist Health	est. cost to connect Baptist Health Systems to the common
Systems	backbone

Appendix D Letters of Support

Please note: In its early stages, ATOM was once named "ATOMIC." Any reference to "ATOMIC" in the provided letters is making reference to ATOM.

Office of Administration and Governmental Affairs

4301 West Markham, #765 Little Rock, AR 72205-7199

501-686-5671 501-686-8137 (fax)

www.uams.edu



Bruce Thomasson, Arkansas Office of Information Technology Dr. Curtis Lowery, UAMS Center for Distance Health Little Rock, AR 72205

May 1, 2007

RE: ATOM (Arkansas Telehealth Oversight Management) Match Commitment

Dear Mr. Thomasson and Dr. Lowery:

As Vice Chancellor of the University of Arkansas for Medical Sciences, I wish to pledge my support and interest in *ATOM*, the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure to create the Arkansas Telehealth Network. Recognizing the health disparities and provider shortages in Arkansas, UAMS wishes to commit match money to the proposed project's required 15% cost share. Our total match commitment totals \$800,000. This money is now earmarked to be utilized in concert with FCC grant funding upon its receipt.

ATOM will be instrumental in modernizing and sculpting existing telehealth capabilities and interoperability in Arkansas, and we are pleased to support these farreaching healthcare efforts.

Respectfully, Buther

rom S. Butler

Vice Chancellor for Administration & Governmental Affairs



ANTENATAL
& NEONATAL
GUIDELINES,
EDUCATION
AND
LEARNING
SYSTEM

4301 W. MARKHAM ST. #518

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(866) 273-3835

ANGELS is a

joint program of the

UAMS College of Medicine,

the Arkansas Department of Human Services and the Arkansas Medical Society Bruce Thomasson, Arkansas Office of Information Technology Dr. Curtis Lowery, UAMS Center for Distance Health Little Rock, AR 72205

May 1, 2007

RE: ATOM (Arkansas Telehealth Oversight Management) Match Commitment

Dear Mr. Thomasson:

As the legally and financially responsible applicant for the Arkansas Telehealth Network proposal, I wish to commit a match of \$37,000 to be used toward the implementation of this project. This money originates from our current budget, and should FCC grant funding be secured, this money will be earmarked for the sole purposes detailed in the pilot program budget.

UAMS ANGELS and Center for Distance Health are proud to play an active role in bringing this forward-thinking project to fruition. This dedicated match money is only one of many contributions we intend to make toward making this project a success.

Respectfully,

Curtis Lowery, MD

Director, Center for Distance Health

Director, ANGELS

University of Arkansas for Medical Sciences

UAMS
UNIVERSITY OF ARKANSAS
FOR MEDICAL SCIENCES

HUMAN





March 29, 2007

Bruce Thomasson, Arkansas Office of Information Technology Dr. Curtis Lowery, UAMS Center for Distance Health Greg Crain, Vice President, BAPTIST HEALTH Little Rock, Arkansas 72205

Re: ATOMIC (Arkansas Telehealth Oversight Management Board for Institutional Collaboration) Partner Agreement

Gentlemen:

As president and chief executive officer of BAPTIST HEALTH, I wish to pledge my support and interest in ATOMIC, the statewide collaborative effort to further develop and consolidate Arkansas's Telehealth network infrastructure. Recognizing the health disparities and provider shortages in Arkansas, BAPTIST HEALTH wishes to support and be included in the list of partners dedicated to ensuring its success.

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and BAPTIST HEALTH to share management and resources to develop the Telehealth infrastructure is a model for statewide resource sharing, and BAPTIST HEALTH is pleased to contribute to the list of partners willing to collaborate for efficient and effective healthcare for Arkansans.

ATOMIC will be instrumental in modernizing and sculpting existing Telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these far-reaching healthcare efforts.

Please do not hesitate to contact me at 501-202-2274 if I can be of further assistance.

Sincerely,

Russell D. Harrington, Jr., FACHE President and Chief Executive Officer

Brance De Hanning -





April 30, 2007

Bruce Thomasson, Arkansas Office of Information Technology Greg Crain, Baptist Health Dr. Curtis Lowery, UAMS Center for Distance Health Little Rock, AR 72205 1401 West Capitol Avenue Suite 300, Victory Building Little Rock, Arkansas 72201

www.achi.net

501-526-ACHI (2244) 501-526-2252 (Fax)

Arkansas Center for Health Improvement 1401 W. Capitol Ave, Suite 300 Little Rock, AR 72201

RE: ATOMIC (Arkansas Telehealth Oversight Management) Partner Agreement

To Whom It May Concern:

As Director of the Arkansas Center for Health Improvement, I am writing to support this statewide collaborative effort to develop and strengthen the telehealth network infrastructure in our state. Recognizing the health disparities and provider shortages in Arkansas, the Arkansas Center for Health Improvement wishes to support and be included in the list of partners dedicated to ensuring its success,

ACHI's mission

is to be a catalyst for

improving the health

of Arkansans through

evidence-based research,

public issue advocacy,

and collaborative

program development.

ATOMIC will be instrumental in modernizing and expanding existing telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these farreaching healthcare efforts.

Please do not hesitate to contact me at 501.526.2244 should I be of any assistance.

Respectfully,

Joseph W. Thompson. MD, MPH

Director



Bruce Thomasson, Arkansas Office of Information Technology Greg Crain, Baptist Health Dr. Curtis Lowery, UAMS Center for Distance Health Little Rock, AR 72205

Arkansas Foundation for Medical Care 401 W Capitol, Suite 508 Little Rock, AR 72201

April 26, 2007

RE: ATOMIC (Arkansas Telehealth Oversight Management) Partner Agreement

Dear Mr. Thomasson, Mr. Crain and Dr. Lowery:

401 W Capitol Suite 508 Little Rock, AR 72201 As representative of Arkansas Foundation for Medical Care (AFMC), I wish to pledge my support and interest in *ATOMIC*, the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure. Recognizing the health disparities and provider shortages in Arkansas, AFMC wishes to support and be included in the list of partners dedicated to ensuring its success.

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and Baptist Health to share management and resources to develop the telehealth infrastructure is a model for statewide resource sharing, and AFMC is pleased to contribute to the list of partners willing to collaborate and for efficient and effective healthcare for Arkansans.

ATOMIC will be instrumental in modernizing and sculpting existing telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these far-reaching healthcare efforts.

Please do not hesitate to contact me at <u>narcher@afmc.org</u> or 1-877-375-5700 should I be of any assistance.

Respectfully,

Nancy Archer

Assistant Vice President, Quality



April 10, 2007

Mr. Bruce Thomasson Arkansas Office of Information Technology 124 W. Capitol Little Rock, AR 72201

Dear Bruce:

The Arkansas Hospital Association (AHA) pledges its support and interest in project ATOMIC (Arkansas Telehealth Oversight Management Board for Institutional Collaboration), the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure. Being acutely aware of provider shortages and disparities in the delivery of healthcare services between urban and rural areas, the AHA supports and wishes to be included in the list of partners dedicated to ensuring the success of ATOMIC.

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and Baptist Health to share management and other resources to develop the telehealth infrastructure is a model for statewide resources sharing. The AHA is pleased to be a partner in this collaborative effort designed to promote and deliver effective and efficient healthcare for Arkansans.

The AHA believes that ATOMIC will be instrumental in modernizing and sculpting existing telehealth capabilities and intercommunication in Arkansas. We are pleased to support these far-reaching healthcare efforts.

Please contact us if additional information is needed or if we can be of further assistance.

Sincerely,

Phil Matthews

PEM/bjs

CHCA

Community Health Centers of Arkansas, Inc.

ARKANSAS PRIMARY CARE ASSOCIATION

Expanding Access to Quality Health Care

BOARD OF DIRECTORS

Boston Mountain Rural Health Center, Inc.

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CABUN Rural Health Services, Inc.

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House, Inc.

Springdale, Arkansas Karky Grizham

Corning Area Healthcare, Inc.

Corning, Arkansas

Brigitte McDonald, President

East Arkansas Family Health

West Memphis, Arkansas

Swan Ward Jones, M.D.

Healthy Connections, Inc.

Mena, Arkansas

Bob Young

Jefferson Comprehensive Care

System. Inc.

Pine Bluff, Arkansas Larnell Davis

Lee County Cooperative

Clinic, Inc.

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Jerry White

White River Rural Health

Center, Inc.

Augusta, Arkansas Steven Collier; M.D.

Nick Pashdis, M.D.

Community Health Centers of Arkansas, Inc.

Stp B. Monden, Ex Officio

Bruce Thomasson, Arkansas Office of Information Technology Dr. Curtis Lowery, UAMS Center for Distance Health Baptist Health Little Rock, AR 72205

January 28, 2007

RE: ATOMIC (Arkansas Telehealth Oversight Management board for Institutional Collaboration) Partner Agreement

Dear Mr. Thomasson and Dr. Lowery:

As Executive Director of the Community Health Centers of Arkansas, Inc., (CHCA), Arkansas Primary Care Association, which represents twelve Community Health Centers and their 55 clinic sites, I wish, to pledge my support and interest in *ATOMIC*, the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure. Recognizing the health disparities and provider shortages in Arkansas, CHCA wishes to support and be included in the list of partners dedicated to ensuring its success,

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and Baptist Health to share management and resources to develop the telehealth infrastructure is a model for statewide resource sharing, and CHCA is pleased to contribute to the list of partners willing to collaborate for efficient and effective healthcare for Arkansans.

ATOMIC will be instrumental in modernizing and sculpting existing telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these far-reaching healthcare efforts.

CHCA and the fifty-five CHCs have benefited from many joint activities with UAMS and look forward to further collaborations. "Connecting, with high speed bandwidth and tele-health, all of the 55 Arkansas Community Health Centers, (CHCs), and the Community Health Centers of Arkansas, Inc., (CHCA), to UAMS, Urban/Rural/Critical Access Hospitals, Community Mental Health Centers, and other providers, institutions, agencies, payors, and programs, such as the Angels Program, will strengthen the CHCs delivery of comprehensive quality patient care to Arkansas's medically neediest and uninsured. This will allow the CHCs to provide evidenced based medicine, share best practices among our peers and consulting specialists and participate in continuing education.

Respectfully

Mrs. Sip Mouden

Executive Director/CEO
Community Health Centers of Arkansas, Inc.



Bruce Thomasson, Arkansas Office of Information Technology Dr. Curtis Lowery, UAMS Center for Distance Health Dr. Greg Crain, Baptist Health Little Rock, AR 72205

Dayspring Behavioral Health Services 5537 Bleaux Avenue Springdale, AR 72764 479-872-5580

January 28, 2007

RE: ATOMIC (Arkansas Telehealth Oversight Management board for Institutional Collaboration) Partner Agreement

Dear Mr. Thomasson, Dr. Lowery and Dr. Crain,

As representative of Dayspring Behavioral Health Services, I wish to pledge my support and interest in ATOMIC, the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure. Recognizing the health disparities and provider shortages in Arkansas, Dayspring Behavioral Health Services wishes to support and be included in the list of partners dedicated to ensuring its success,

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and Baptist Health to share management and resources to develop the telehealth infrastructure is a model for statewide resource sharing, and Dayspring Behavioral Health Services is pleased to contribute to the list of partners willing to collaborate and for efficient and effective healthcare for Arkansans.

ATOMIC will be instrumental in modernizing and sculpting existing telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these farreaching healthcare efforts.

Please do not hesitate to contact me at wrobbins@dayspringbhs.com or 479-872-5580 x201 should I be of any assistance.

Respectfully,

Wes Robbins

CEO,

Dayspring Behavioral Health Services



Arkansas Department of Health and Human Services



Division of Health

Paul K. Halverson, DrPH, Director

P.O. Box 1437, Slot H-39 Little Rock, AR 72203-1437 • 501-661-2000 • TDD: 1-800-234-4399

April 25, 2007

Bruce Thomasson, Arkansas Office of Information Technology Greg Crain, Baptist Health Dr. Curtis Lowery, UAMS Center for Distance Health Little Rock, AR 72205

RE: ATOMIC (Arkansas Telehealth Oversight Management) Partner Agreement

Dear Mr. Thomasson, Mr. Crain and Dr. Lowery:

As Director of the DHHS Division of Health, I wish to pledge my support and interest in ATOMIC, the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure. Recognizing the health disparities and provider shortages in Arkansas, the Division of Health wishes to support and be included in the list of partners dedicated to ensuring its success.

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and Baptist Health to share management and resources to develop the telehealth infrastructure is a model for statewide resource sharing, and the Division of Health is pleased to contribute to the list of partners willing to collaborate and for efficient and effective healthcare for Arkansans.

ATOMIC will be instrumental in modernizing and sculpting existing telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these far-reaching healthcare efforts.

Please do not he sitate to contact me at 501-661-2400 should I be of any assistance.

Respectfull

Paul K./Halverson, DrPH

Director and State Health Officer



Arkansas Department of Health and Human Services



Office of Director

P.O. Box 1437, Slot S-201 • Little Rock, AR 72203-1437 • 501-682-8650 • Fax: 501-682-6836 • TDD: 501-682-8933

April 25, 2007

Bruce Thomasson, Arkansas Office of Information Technology Greg Crain, Baptist Health Dr. Curtis Lowery, UAMS Center for Distance Health Little Rock, AR 72205

RE: ATOMIC (Arkansas Telehealth Oversight Management) Partner Agreement

Dear Mr. Thomasson, Mr. Crain and Dr. Lowery:

As the Director of the Arkansas Department of Health & Human Services (ADHHS), I wish to pledge my support and interest in *ATOMIC*, the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure. Recognizing the health disparities and provider shortages in Arkansas, the Department of Health & Human Services wishes to support and be included in the list of partners dedicated to ensuring its success.

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and Baptist Health to share management and resources to develop the telehealth infrastructure is a model for statewide resource sharing, and ADHHS is pleased to contribute to the list of partners willing to collaborate for efficient and effective healthcare for Arkansans.

ATOMIC will be instrumental in modernizing and sculpting existing telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these far-reaching healthcare efforts.

Please do not hesitate to contact me should I be of any assistance.

Sincerely,

John Selig

DHHS Director



236 Sharkey Avenue / Suite 400 / Clarksdale, MS 38614 / (662) 624-8600 / Fax: (662) 624-8537 / www.dra.gov

Jan. 26, 2007

Dr. Curtis Lowery
Dr. Anne Bynum
Center for Distance Health
UAMS College of Medicine
4301 W. Markham St., Slot 518
Little Rock, AR 72205

Dear Dr. Lowery and Dr. Bynum:

Those of us at the Delta Regional Authority are excited that the University of Arkansas for Medical Sciences and Baptist Health are leading the effort for statewide telehealth infrastructure funding in response to an upcoming Federal Communications Commission initiative.

The DRA fully supports your efforts to connect existing telehealth networks and add network availability to areas of Arkansas that lack access to this technology. The Delta is an area that needs more access to this technology.

The DRA board has identified information technology as one of its three policy priorities. We must use technology to improve health access, quality and affordability. Your efforts, along with those of the other partners in the FCC Coalition Consortium, will help us achieve that goal.

We stand ready at the DRA to assist you in any way possible, whether it be through research or by disseminating information on your progress through our various events.

Your efforts have a tremendous potential to improve the lives of Arkansans in the rural and medically underserved areas we represent. Thank you and let us know how we can assist.

Sincerely,

Rex Nelson

Alternate Federal Co-Chairman

Delta Regional Authority



Bruce Thomasson, Arkansas Office of Information Technology Dr. Curtis Lowery, UAMS Center for Distance Health Dr. Greg Crain, Baptist Health Little Rock, AR 72205

TRACS Training and Research in Aging Children Services 5537 Bleaux Avenue Springdale, AR 72764 479-872-5580

January 28, 2007

RE: ATOMIC (Arkansas Telehealth Oversight Management board for Institutional Collaboration) Partner Agreement

Dear Mr. Thomasson, Drs. Lowery and Dr. Crain,

As representative of TRACS, I wish to pledge my support and interest in ATOMIC, the statewide collaborative effort to further develop and consolidate Arkansas' telehealth network infrastructure. Recognizing the health disparities and provider shortages in Arkansas, TRACS wishes to support and be included in the list of partners dedicated to ensuring its success,

The landmark agreement between the University of Arkansas for Medical Sciences (UAMS) and Baptist Health to share management and resources to develop the telehealth infrastructure is a model for statewide resource sharing, and TRACS is pleased to contribute to the list of partners willing to collaborate and for efficient and effective healthcare for Arkansans.

ATOMIC will be instrumental in modernizing and sculpting existing telehealth capabilities and intercommunication in Arkansas, and we are pleased to support these far-reaching healthcare efforts.

Please do not hesitate to contact me at rdowns@dayspringbhs.com or 479-631-9996 should I be of any assistance.

Respectfully,

Ralph Downs

Oph Downs

Executive Director

TRACS

Mission:

"Use existing physical, intellectual, networking, and relationship resources throughout the state to increase awareness and promote the treatment for co-occurring, emotional, and addictive disorders."



Internet2
Office of the President & CEO
1000 Oakbrook Drive, Suite 300
Ann Arbor, MI 48104
(734) 913-4250
(734) 913-4255 (fax)
www.internet2.edu

May 1, 2007

Bruce Thomasson Arkansas Office of Information Technology 124 West Capitol, Suite 990 Little Rock, AR 72201

Dear Mr. Thomasson:

On behalf of Internet2, I am pleased to write in strong support of the proposal for the Arkansas Telehealth Oversight and Management proposal that is being submitted to the Federal Communication Commission in response to the Rural Health Care Support Mechanism, WE Docket No. 02-60

This proposal's strengths include its:

- Consortium of 17 primary partners including all acute care hospitals, publicly funded clinics and health centers, and state agencies and offices;
- Linkages between these health care providers and the 530 K-12 sites within the state's educational network:
- Use of Internet2's high bandwidth network to provide access to unmatched content and support; and
- Likelihood of enhancing telehealth in Arkansas through a cohesive and consolidated telehealth network, achieving interoperability between the state's educational and telehealth resources with the potential of improving in-school health programs, improving access to specialty medical care, enhancing the timely and accurate delivery of health care records, and costeffectively improving statewide health care.

The proposal will utilize the new Internet2 Network and the regional networks to expand the telehealth infrastructure and provide high speed connections to all participants. By incorporating Internet2's middleware, security, and performance measurement tools, it also will provide secure exchange of medical records, permit remote access to expert diagnosis and treatment, increase cost-efficiencies by reducing costs associated with travel, and enhance training and research collaboration with secure multi-site videoconferencing. The use of Internet2's network not only will provide an effective, secure, and system for statewide and national telehealth and telemedicine, but also will ensure that training and other integrated resources will be incorporated to optimize the network's utility. In doing

so, the regional network that will be created will facilitate the exchange of reliable data, and digital image, voice, and video transmissions with quality to enhance real-time clinical consultation.

Internet2 is the foremost U.S. advanced networking consortium. Led by the research and education community since 1996, Internet2 promotes the missions of its members by providing both leading-edge network capabilities and unique partnership opportunities that together facilitate the development, deployment and use of revolutionary Internet technologies. The Internet2 Network and its member community innovations in middleware, security, educational networking, and partnerships with premier federal agencies such as NIH are uniquely positioned to deliver high performance, flexible, low-cost connectivity in support of healthcare needs on a sustained basis on the local, regional, state, and national levels. In the process, these partnerships are likely to expand technological capabilities, increase the range of geographical access to sophisticated treatment modalities, and redefine the parameters of disease diagnosis, treatment, and management.

We are pleased to offer our strong support for this innovative proposal, which will enhance the provision of telehealth and telemedicine services regionally and nationwide.

Sincerely,

Douglas E. Van Houweling President and CEO, Internet2

Office of the Chancellor

4301 West Markham, #541 Little Rock, AR 72205-7199

501-686-5681 501-686-8137 (fax)

www.uams.edu

May 4, 2007

I. Dodd Wilson, M.D. Chancellor



Dr. Curtis Lowery
Dr. Anne Bynum
Center for Distance Health
UAMS College of Medicine
4301 West Markham, Slot 518
Little Rock, AR 72205

Dear Drs. Lowery & Bynum:

This letter serves to recognize and encourage your efforts in enhancing needed telehealth services in Arkansas. Arkansas has a very diverse population and we need resources that will allow us to overcome our state's health care concerns. Especially in rural, outlying regions of Arkansas, telehealth is instrumental in supporting the providers and patients seeking specialty support and collaboration. UAMS has taken the lead in the effort to build the Arkansas Telehealth Oversight and Management Board. This Board's work represents a landmark event in bringing Arkansas' healthcare organizations and stakeholders to a collective agreement — Arkansas deserves an improved telehealth network for the good of all.

UAMS' mission to teach, to heal, and to search and to serve is upheld through the development of the Arkansas Telehealth Network. The launch of this network will enable UAMS to further achieve its mission by reaching every area of the state through telehealth connectivity and collaborations. Please keep me apprised of the status of the FCC proposal and any assistance I might provide.

As Chancellor of UAMS, I fully support this effort, which is certain to benefit all of Arkansas. Should I be of any further assistance, please do not hesitate to contact me.

Respectfully,

I. Dodd Wilson, MD

Chancellor

IDW:jb



4207 Bell Engineering Center • Fayetteville, Arkansas 72701 • 479-575-3156 • 479-575-8431 (FAX)

College of Engineering

Department of Industrial Engineering

April 30, 2007

Mr. Bruce Thomasson Enterprise Architect Arkansas Office of Information Technology 124 West Capitol; Suite 990 Little Rock, Arkansas 72201

As I think you know, the Colleges of Engineering and Business at the UA-Fayetteville recently announced that they will partner with the Wal-Mart Stores, Inc., Blue Cross Blue Shield, and medical providers like UAMS to create an interdisciplinary research center focused on improving the healthcare delivery system through the use of information technology. That Center for Innovation in Healthcare Logistics (CIHL) will target research aimed at identifying and addressing gaps and roadblocks in the application and delivery of healthcare that can be addressed with improved information and logistic flows, as well as highlighting and replicating proven applications that are working to benefit patients and providers. The goal is to recover significant costs and achieve new efficiencies while improving safety, quality, and access to patient care.

An important part of the CIHL vision is to reach beyond large urban hospitals to the challenges of bringing healthcare to massively under-served rural and minority populations. Information and material flows must substitute for scarce healthcare practitioner resources if quality healthcare is to reach those rural and under-served populations. In some settings, patients must be provided transportation. Whenever test samples are referred outside the local region, they must be shipped and tracked through appropriate package or mail networks to the desired destination, then monitored to see that results are returned in a timely manner. If the patient has to visit another facility, that appointment has to be scheduled, and results of the visit have to flow back to both the local provider and remote consulting physicians. In some ways this is not unlike what more upscale patients experience as they are referred around urbanized areas. However, the distances involved and the often indigent status of the patients makes all the logistic issues far more complex.

All of this demands high speed IT connectivity to under-served rural populations. The proposed ATOM infrastructure will be invaluable to CIHL's making progress on this part of its mission by providing that infrastructure for the first time. Innovative new approaches to cost-effective distance healthcare delivery, developed in partnership between UAF and UAMS, could be among the early breakthrough software solutions enabled by the ATOM network. I am most pleased to endorse your proposal to meet this critical need in Arkansas.

Best regards,

RON

Ronald L. Rardin, Ph.D. Director, Center for Innovation in Healthcare Logistics John and Mary Lib White Systems Integration Chair and Distinguished Professor



423 Main Street, Suite 200 Little Rock, Arkansas 72201

www.ArkansasScienceAndTechnology.org

Phone: 501.683.4400 Fax: 501.683.4420

May 3, 2007

Curtis Lowery, M.D.
UAMS Center for Distance Health
University of Arkansas for Medical Sciences
Little Rock, AR 72205

Re: Proposal entitled "Arkansas Telehealth Oversight & Management (ATOM)"

Dear Dr. Lowery:

The Arkansas Science & Technology Authority supports and endorses your efforts and those of Mr. Bruce Thomasson, Arkansas Office of Information Technology, in organizing a unique approach to create a single, interoperable statewide Arkansas Telehealth Network, compatible with a nationwide system.

As a toxicologist, I understand the need to expand the Network to increase access to health care and health education, especially for providers and patients in medically underserved rural and Delta areas of the state. Such access will be useful for both immediate diagnoses and medical treatment in emergency scenarios and also for educational programs and training on health issues related to long-term chronic conditions. The comprehensive inclusion of primary healthcare partners, providers, and the broader educational community will allow Arkansas to develop a unique and replicable telehealth model. The varying perspectives of the healthcare partners and researchers participating in this project are unified to create a very interesting and holistic approach to both basic research and the translational aspects of access to specialty medical care, timely and accurate delivery of health care records, cost-effectiveness of and improvement of statewide health care delivery.

The Arkansas Science & Technology Authority is very interested in leveraging Arkansas' research and development financing at every available opportunity for extremely promising projects. Some aspects of R&D within the project may also qualify for a variety of economic incentives offered by agencies within our state. If the Federal Communication Commission expresses interest in this project, we at the Arkansas Science & Technology Authority would be happy to explore ways to assist in the support of this project through funds appropriated to support university research and university-industry partnerships. The Arkansas Science & Technology Authority will also be happy to alert you to other funding options for obtaining necessary matching funds such as Technology Transfer grants, Centers for Applied Technology and other funding opportunities within the Authority.

If you have any further questions, feel free to contact me at (501) 683-4407.

Sincerely,

Gail Y. H. McClure, Ph.D.

ail McClure

Vice President Research

ARKANSAS DEPARTMENT OF

Dr. T. Kenneth James, Commissioner



4 State Capitol Mall • Little Rock, AR 72201-1071 (501) 682-4475 http://ArkansasEd.org

May 4, 2007

Dr. Curtis Lowery Dr. Anne Bynum Center for Distance Health UAMS College of Medicine 4301 West Markham, Slot 518 Little Rock, AR 72205

Dear Drs. Lowery and Bynum:

Upon learning of the Arkansas Telehealth Oversight and Management (ATOM) Board, the Arkansas Department of Education realized its collaboration and support in the initiative could yield impressive results. By facilitating connection between the Arkansas Video Network (VNct) and the Arkansas Telehealth Network, we can anticipate any number of innovative health care education and consultation projects to be implemented in Arkansas' schools. The Arkansas Department of Education is proud to support ATOM in its efforts to expand the capacities of the Arkansas Telehealth Network.

Arkansas' schools can reap the many benefits of health care access within their facilities, as we are currently witnessing at the Lee County school telehealth clinic. This pilot has pioneered the concept of school-based health education and intervention as delivered through telemedicine and is certain to provide a model to replicate elsewhere in the State. With this foundation in place, the VNet connection to the Arkansas Telehealth Network can open the door to countless possibilities for collaboration among health care facilities and the Arkansas Department of Education. ATOM is capitalizing on a unique relationship among video networks by facilitating this communication between health care and education. We look forward to the potential applications that may assist our students, faculty, and support staff.

The ATOM Board has our support and dedication in collaborating with this innovative initiative. Should our organization be of further assistance in your grant-seeking efforts, please do not hesitate to contact me. This idea is certain to promote improved health care for all of Arkansas, especially among the students and families that support Arkansas' schools.

Sincerely,

James Boardman

Assistant Commissioner

Research and Technology

Tomes Boardman



STATE OF ARKANSAS
MIKE BEEBE
GOVERNOR
April 30, 2007

Dr. Curtis Lowery
Dr. Anne Bynum
Center for Distance Health
UAMS College of Medicine
4301 West Markham, Slot 518
Little Rock, AR 72205

Dear Drs. Lowery and Bynum:

In my role as Governor, it is my goal to inspire Arkansans to improve in all areas, especially in the area of health care. I was recently advised that UAMS is seeking pilot-program funding through the Federal Communications Commission to build an impressive, statewide health-care initiative. As proposed, the Arkansas Telehealth Oversight and Management Board would consolidate existing telehealth networks and expand telehealth accessibility to areas without ready access to this emerging health-care technology. Further, I understand that you intend to connect the statewide infrastructure to the Arkansas Educational Video Network to open the door for collaborative health-care possibilities in Arkansas schools. I commend your effort in allying through the ATOM Board, while duly working toward achieving a myriad of health-care improvements in Arkansas. Your efforts will result in a collaborative, progressive state-supported initiative, and this has the potential to impact every Arkansan.

Although Arkansas faces health-care deficiencies and barriers, through your ATOM Board efforts, you have identified a tool that can help to eliminate these shortcomings. Widespread accessibility to telehealth is essential to the citizens of our State. As evidenced through your ANGELS program, telehealth can impact both provider and patient, enhancing the health-care climate for all. Patients can also seek the support they need in their hometowns through telehealth, which is a necessity to so many residents living in the rural areas of Arkansas. This initiative has my full support, and I will work to support your efforts in any way I can. Please contact Joyce Dees of my office, at 683-6428, if we can be of further assistance.

Sincerely

Mike Beebe

MARION BERRY 1ST DISTRICT, ARKANSAS

COMMITTEE: APPROPRIATIONS

2305 RAYBURN HOUSE OFFICE BUILDING WASHINGTON, DC 20515 Tel.: (202) 225–4076 FAX: (202) 225–5602

Congress of the United States House of Representatives

Washington, **BC** 20515-0401

May 1, 2007

108 EAST HUNTINGTON AVENUE JONESBORD, AR 72401 Tel.: (800) 866-2701 FAX: (870) 972-4605

116 NORTH FIRST STREET SUITE C-1 CABOT, AR 72023 TEL.: (501) 643-3043 FAX: (501) 643-4955

1 EAST 7TH STREET SUITE 200 MOUNTAIN HOME, AR 72653 TEL: (870) 425-3510 FAX: (870) 425-3511

Dr. Curtis Lowery
Dr. Anne Bynum
Center for Distance Health
UAMS College of Medicine
4301 West Markham, Slot 518
Little Rock, AR 72205

Dear Drs. Lowery and Bynum:

As a member of Congress from the First District of Arkansas, I try to take every opportunity to commend and support initiatives that fulfill my hopes and visions for our great State. I have recently learned of the Arkansas Telehealth Oversight and Management Board and its intention through UAMS to apply for FCC grant funding to enhance and expand existing accessibility to statewide telehealth. Throughout my time in office, I have aligned my focus on rural outreach and health care, both of which are the foundation of your proposed initiative through the Arkansas Telehealth Oversight and Management Board. For these reasons, I wish to pledge my support to your FCC Rural Health Care Pilot Program Proposal.

The Arkansas Delta exhibits a great need in health care and is naturally an area of emphasis in these efforts. I appland you for designing and working toward implementing an interconnected, interagency telehealth infrastructure aimed to serve Arkansans, including the Delta region. I am confident ATOM can accomplish the far-reaching goals and objectives set forth by the proposed program, as the collaboration is inclusive of all of Arkansas' health care stakeholders. Together, we can build health care resources that benefit everyone.

I take pleasure in endorsing this worthy project. I hope your proposed program will bring great improvement to the existing telehealth networks, establishing a system with ease in communication and data sharing at the forefront. Should my office be of any assistance to you, please notify me.

Sincerely,

MARION BERRY

Member of Congress

MB/ka

PAUL BOOKOUT

SENATOR 14TH DISTRICT OFFICE: 870-932-6662

1900 WEST WASHINGTON JONESBORO, ARKANSAS 72401-2577

May 3, 2007

Dr. Curtis Lowery
Dr. Anne Bynum
Center for Distance Health
UAMS College of Medicine
4301 West Markham, Slot 518
Little Rock, Arkansas 72205



THE SENATE STATE OF ARKANSAS Member:
JOINT AUDIT
JOINT BUDGET
JOINT RETIREMENT & SOCIAL SECURITY
JOINT ENERGY
TRANSPORTATION, TECHNOLOGY &
LEGISLATIVE AFFAIRS
INSURANCE & COMMERCE

Dear Drs. Lowery & Bynum:

I am excited to submit this letter in support of your efforts to enhance needed telehealth services in Arkansas. Health care is a concern of citizens statewide, thus it is important to have health care solutions that reach all areas of Arkansas, particularly in the rural areas.

As a member of the Senate Transportation, Technology, and Legislative Affairs Committee, I am greatly concerned about finding solutions for Arkansas. The University of Arkansas for Medical Science's proposal to the FCC Pilot Project is one solution for health care needs. I admire the efforts of our state's healthcare stakeholders to collaborate through the ATOM Board and create a venture that will keep the state's best health care interests in mind while providing a collective effort for carrying out programmatic activities. Through this proposal, consolidating the existing statewide telehealth networks will pool your shared health care resources to better serve Arkansans and bring subspecialty care to localities that never saw such support. Also, by connecting our state's public schools to telehealth resources, you make it possible to deliver services never provided through our school system: specialty and subspecialty care without leaving the school nurses' office. This innovation will revolutionize our school system through the possibility of decreasing absenteeism, improving health, and enhancing quality care.

To recognize and further explore the implications of your efforts to enhance broadband health care services, I requested an interim study of the described initiative. On March 26, 2007, I filed the request for an interim study (SR-30) on expanding and consolidating the existing telehealth networks in Arkansas, and by March 30, 2007, the Senate Committee on Transportation, Technology, and Legislative Affairs returned the request with a "Do Pass." This request has been adopted. I am pleased to work alongside this project to evaluate its implied benefits for our great state, while simultaneously working toward the sustainability of your ambitious endeavor. Again, I support these efforts as this interim study will seek to further support the upcoming tasks laid before you. If I can be of further assistance in this matter, please do not hesitate to contact me.

Sincerely,

Paul Bookout State Senator District 14

PB:sl

1. Bohait

JOHN BOOZMAN
3RD DISTRICT, ARKANBAB
www.boozman.house.gov
TRANSPORTATION AND
INFRASTRUCTURE
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AVIATION

HIGHWAYS, TRANSIT, AND PIPELINES
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POLICY COMMITTEE

SPEAKER'S TASK FORCE FOR A DRUG FREE AMERICA

Congress of the United States House of Representatives

Washington, **四**C 20515

INTERNATIONAL RELATIONS
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AFRICA, GLOBAL HUMAN RIGHTS
AND
INTERNATIONAL OPERATIONS
MIDDLE EAST AND
CENTRAL ASIA

VETERANS' AFFAIRS
SUBCOMMITTEES:
CHAIRMAN,
ECONOMIC OPPORTUNITY

OVERSIGHT AND INVESTIGATIONS

May 3, 2007

Dr. Curtis Lowery
Dr. Anne Bynum
Center for Distance Helath
4301 West Markham Street, # 518
Little Rock, AR 72205-7101

Dear Drs. Lowery and Bynum:

I am very happy to express my support for the Arkansas Telehealth Oversight and Management Board proposal to receive funding through the Federal Communications Commission. The Arkansas Telehealth Oversight and Management Board will use funds received to build a state and region-wide broadband network dedicated to the provision of healthcare services that will connect those networks to Internet2.

The state of Arkansas has a chance to be on the "cutting edge" in providing the public and non-profit health care providers a region-wide broadband network to supply telehealth and telemedicine services throughout the nation. The State of Arkansas has taken the first step in the process by aligning all of its major healthcare service organizations and stakeholders necessary in building the framework for a fully-connected, tactically-expanded and efficiently-managed statewide telehealth system. Through your help with this program and the initial step from Arkansas, this program will grow long into the future. I hope you will share my belief that this project clearly fits the application guidelines and will be beneficial to residents in Arkansas.

Thank you in advance for your time and consideration of this matter, and please keep me informed of the status of this funding request. I am grateful for the help that your office provides to the 3rd District.

Sincerely,

John Boozman

Member of Congress

JB: tr

1519 Longworth House Office Building Washington, DC 20515 (202) 225-4301 FAX: (202) 225-5713 213 WEST MONROE, SUITE K LOWELL, AR 72745 (479) 725-0400 FAX: (479) 725-0408 4943 OLD GREENWOOD ROAD, SUITE 1 FORT SMITH, AR 72903 (479) 782-7787 FAX: (479) 783-7662 303 North Main, Suite 102 Harrison, AR 72601 (870) 741-6900 FAX: (870) 741-7741 MARK PRYOR ARKANSAS

COMMITTEES:
COMMERCE, SCIENCE AND TRANSPORTATION

HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

SELECT COMMITTEE ON ETHICS

SMALL BUSINESS AND ENTREPRENEURSHIP

United States Senate

WASHINGTON, DC 20510

May 3, 2007

257 DIRKSEN SENATE OFFICE BUILDING WASHINGTON, DC 20510 (202) 224–2353

500 PRESIDENT CLINTON AVENUE
SUITE 401
LITTLE ROCK, AR 72201
(501) 324-6336
Toll Free: (877) 259-9602
http://prvor.senate.gov

Dr. Curtis Lowery Dr. Anne Bynum Center for Distance Health UAMS College of Medicine 4301 West Markham, Slot 518 Little Rock, Arkansas 72205

Dear Drs. Lowery and Bynum:

I am pleased to offer you this letter of support for your upcoming grant submission to the FCC. It is my understanding UAMS is answering a call issued by the FCC Rural Health Care Pilot Project, in a historical feat that has allied Arkansas' major healthcare service organizations and stakeholders, building the framework for a fully-connected, tactically-expanded, and efficiently-managed statewide telehealth system. The development of the ATOM Board already marks a major accomplishment in achieving the goals and objectives set forth by this proposed initiative. My interests lie in improving health care for all Arkansans, and this initiative will do just that.

Your proposed pilot program will revolutionize the composition, interoperability, and management of Arkansas' telehealth efforts through the ATOM Board. Through this Board, I am certain you will wish to shape policy, and I wish to pledge the assistance of my office. Please include us in the distribution of your project results and ATOM Board meeting minutes, so that I can support your collaborative efforts to improve health care in Arkansas, with an emphasis on the Delta.

I am certain the strength of your alliance only solidifies your FCC proposal, as this collaboration is truly unprecedented in the state. Further, your proposed work plan is beneficial to both patient and provider. I cannot think of a more qualified collection of agencies to carry out this impressive mission. I hope you find success for the sake of all Arkansans. Should I be of any further assistance, please contact my Deputy State Director, Richard E. Swan, at 501-324-6336.

Sincerely,

Mark Pryor

BLANCHE LAMBERT LINCOLN ARKANSAS

912 WEST FOURTH STREET LITTLE ROCK, AR 72201 (501) 375-2993 (800) 352-9364 (IN ARKANSAS ONLY)

United States Senate

COMMITTEES:
AGRICULTURE, NUTRITION, AND FORESTRY
ENERGY AND NATURAL RESOURCES
FINANCE
SPECIAL COMMITTEE ON AGING

www.senate.gov/~lincoln

WASHINGTON, DC 20510

May 3, 2007

Dr. Curtis Lowery
Dr. Anne Bynum
Center for Distance Health
UAMS College of Medicine
4301 West Markham, Slot 518
Little Rock, Arkansas 72205

Dear Drs. Lowery and Bynum:

I am pleased that the UAMS Arkansas Telehealth Oversight and Management Board has submitted an application to the Federal Communications Commission (FCC) for grant funding to enhance and expand accessibility to state-wide telehealth communication.

Providing rural access to heath care is among my highest priorities. The Mississippi Delta Region of Arkansas is among areas of our state that exhibits the need for increased access to health care. I appreciate the Arkansas Telehealth Oversight and Management Board's commitment to design and interconnected, interagency telehealth communication infrastructure that will serve our under-served citizens in the Delta and across our state.

I wholeheartedly endorse your plan and applaud your decision to seek FCC funding. I hope you will not hesitate to contact me when I may be of service to you and UAMS.

Sincerely,

Blanche L. Lincoln

Blewh L. Lincoln_

BLL:dky

VIC SNYDER 2D DISTRICT, ARKANSAS

HOME OFFICE: 1501 N. UNIVERSITY AVENUE #150 LITTLE ROCK, AR 72207-5230 (501) 324-5941 FAX (501) 324-6029 TDD (501) 324-5922

Congress of the United States House of Representatives

Washington, DC 20515-0402

COMMITTEE ON ARMED SERVICES COMMITTEE ON VETERANS' AFFAIRS

WASHINGTON, DC OFFICE: 1330 LONGWORTH HOUSE OFFICE BUILDING WASHINGTON, DC 20515-0402 (202) 225-2506 FAX (202) 225-5903 SNYDER.CONGRESS@MAIL.HOUSE.GOV

web: www.house.gov/snvder/

May 2, 2007

Dr. Curtis Lowery Dr. Anne Bynum Center for Distance Health UAMS College of Medicine 4301 West Markham, Slot 518 Little Rock, AR 72205

Dear Drs. Lowery and Bynum:

As a family physician and a member of the Congressional Rural Health Care Caucus, I understand the challenges that many Arkansas communities face in the provision of health care services. Therefore, I was happy to learn of the Arkansas Telehealth Oversight and Management Board (ATOM) and its intention through the University of Arkansas for Medical Sciences (UAMS) to apply for FCC grant funding to enhance and expand accessibility to existing statewide telehealth networks.

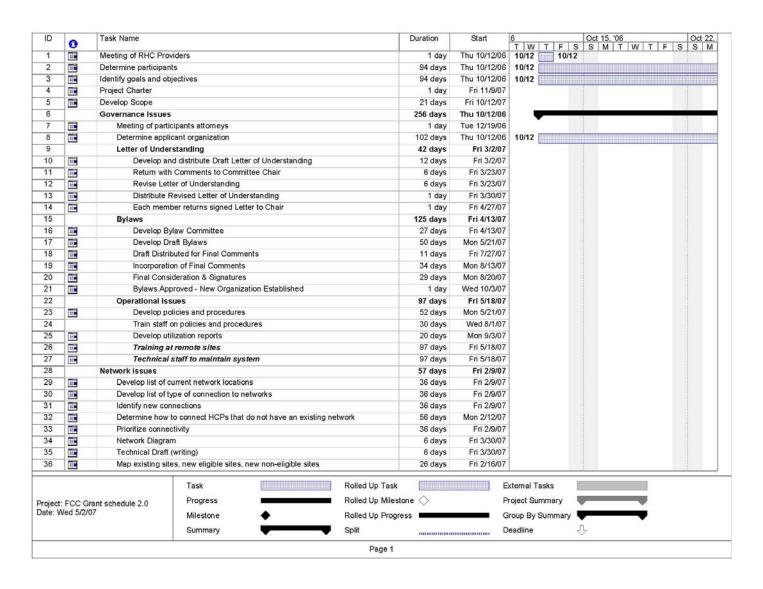
I applaud you for designing and working toward implementing an interconnected, interagency telehealth infrastructure aimed to serve Arkansans. I am confident ATOM can accomplish the far-reaching goals and objectives set forth by the proposed program, as the collaboration is inclusive of all of Arkansas' health care stakeholders. Together, Arkansas can build health care resources that benefit everyone.

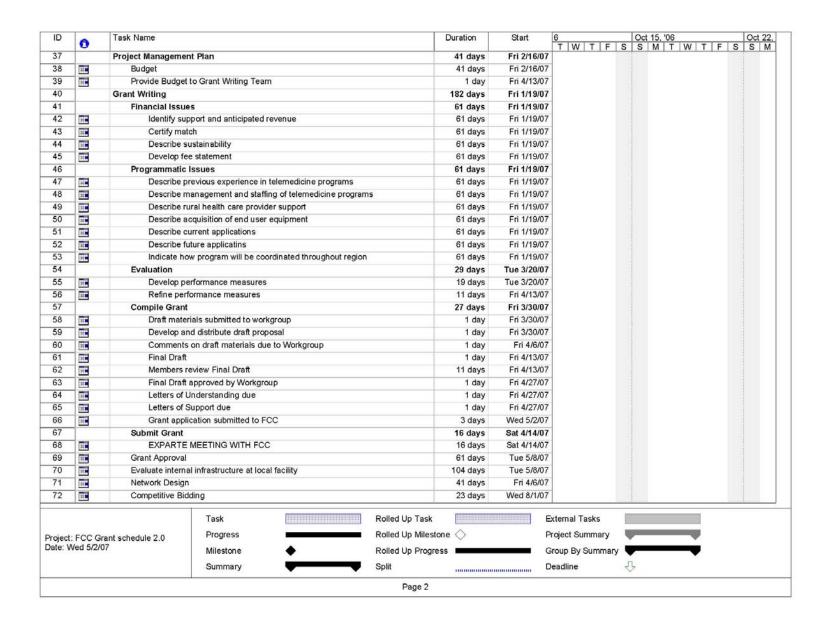
I support your FCC Rural Health Care Pilot Program proposal, and I am hopeful that the proposed program will bring great improvement to existing telehealth networks. If my office can be of any additional assistance to you, please don't hesitate to let me know.

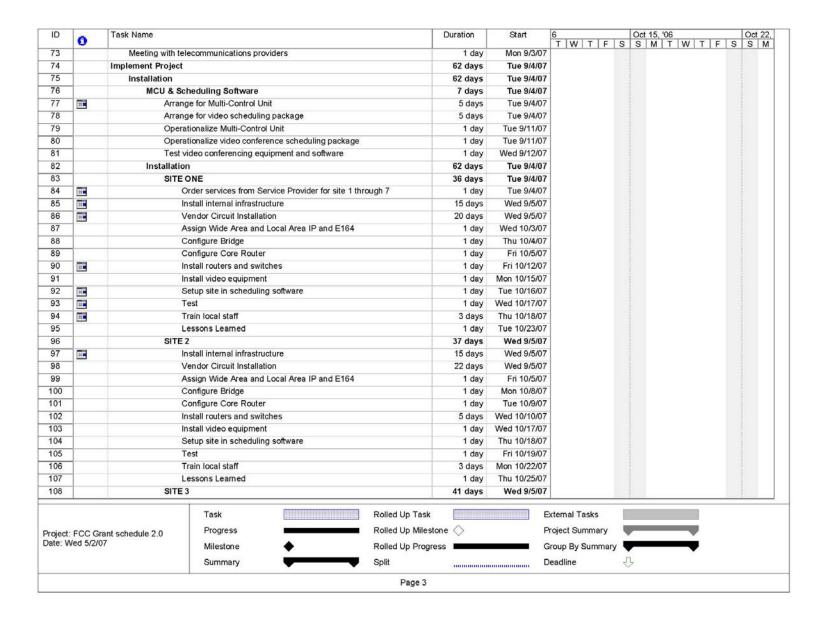
Sincerely,

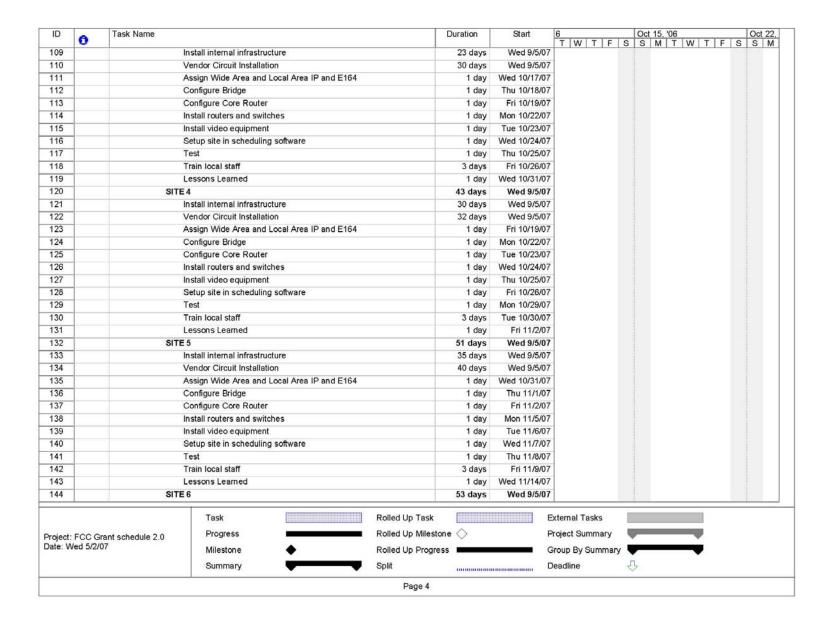
Member of Congress

Appendix E ATOM Schedule









145	O las	sk Name	Duration	Start	6 Oct 15, '06 Oct 22, T W T F S S M T W T F S S M
		Install internal infrastructure	37 days	Wed 9/5/07	1 0 0 0 0 0 0 0 0 0
146		Vendor Circuit Installation	42 days	Wed 9/5/07	
147		Assign Wide Area and Local Area IP and E164	1 day	Fri 11/2/07	
148		Configure Bridge	1 day	Mon 11/5/07	
149		Configure Core Router	1 day	Tue 11/6/07	
150		Install routers and switches	1 day	Wed 11/7/07	
151		Install video equipment	1 day	Thu 11/8/07	
152	i	Setup site in scheduling software	1 day	Fri 11/9/07	
153		Test	1 day	Mon 11/12/07	
154		Train local staff	3 days	Tue 11/13/07	
155		Lessons Learned	1 day	Fri 11/16/07	
156		SITE 7	61 days	Wed 9/5/07	
157		Install internal infrastructure	44 days	Wed 9/5/07	
158		Vendor Circuit Installation	50 days	Wed 9/5/07	
159		Assign Wide Area and Local Area IP and E164	1 day	Wed 11/14/07	
160		Configure Bridge	1 day	Thu 11/15/07	
161	1	Configure Core Router	1 day	Fri 11/16/07	
162		Install routers and switches	1 day	Mon 11/19/07	
163		Install video equipment	1 day	Tue 11/20/07	
164	i	Setup site in scheduling software	1 day	Wed 11/21/07	
165		Test	1 day	Thu 11/22/07	
166		Train local staff	3 days	Fri 11/23/07	
167		Lessons Learned	1 day	Wed 11/28/07	
3.55					
25'		Task	· Demograph Control of S		external Tasks
Project:	FCC Grant so	D	Rolled Up Task Rolled Up Milestone ◇		external Tasks
Project:	FCC Grant so led 5/2/07	D	· · · · · · · · · · · · · · · · · · ·	P	and the state of t
Project:		chedule 2.0 Progress	Rolled Up Milestone Rolled Up Progress	P G	Project Summary

Appendix F Evaluation Tool

Current Video & Data Connectivity

<u>Current Video & Data C</u>	connectivity		
Equipment & Connections			
Facility Type	Minimum	Baseline	Reporting
	Adequate Connection	Percent Connected	Period Percent
Urban Clinic	T1	Connected	Fercent
Urban Hospital	OC3		+
Rural Clinic	T1		1
	T1		
Rural Hospital			
Behavioral Health	T1		
Community Health Centers	T1		
Video & Image Transfer		T G	T +
Type of Service	Baseline Mean	Current Count	Increase over
	Delivered	Count	Baseline
Emergency department services			
Emergency preparedness			
Primary medical and dental			
Home health			
Mental health counseling			
Prenatal services			
Speech pathology			
Store-and-forward imaging			
Tele-audiology			
Other sub-specialty care			
Data Transfer			
Type of Transfer	Baseline	Current	Increase
	Mean	Count	over
P: 4	Delivered		Baseline
Birth reporting			
Death reporting			-
Breast & cervical cancer reporting			-
Electronic medical records			
Hospital discharge summaries			
Medicaid billing			1
Pharmacy			
Public health disease reporting			
Tracking, sharing & reporting best practices			
Patients seeking ED care for non-emergencies			
Uninsured / underinsured demographics			
Administration & Education	_		
Type of Educational Service	Baseline	Current	Increase

	Mean Delivered	Count	over Baseline
Patient education			
Professional education			
Provide telehealth services			
Video staff meetings			

Appendix G

Competing Agreement

NOTICE OF COMPLIANCE AND REQUST FOR WAIVER OF COMPETITIVE BIDDING REQUIREMENTS

The Arkansas Office of State Purchasing issued a request for proposal (RFP) in October 2006 for statewide Frame Relay and ATM service. The RFP listed every exchange in the state. When the RFP was released, a statewide E-rate form 470 was filed for the Schools and Libraries Program. One hundred and nineteen (119) E-rate Form 465s were filed for the Rural Health Care Program.

In February 2007, a five (5) year contract with two (2) one (1) year extensions was awarded to the major local exchange carriers (LECs): AT&T, CenturyTel and Windstream. Each LEC bid the company's existing footprint. The remaining telecommunication carriers in the state are the rural incumbent carriers covering areas where there is no competition.

As a result, and for purposes of this grant application, the State of Arkansas requests a waiver of the FCC's competitive bidding requirement (set forth in section 54:603) that mandates posting of the Rural Health Care Program's E-rate Form 465 for existing contracts. In addition, the State of Arkansas requests that these contracts be deemed evergreen contracts for the purposes of the grant application for the FCC Pilot Project.

The State of Arkansas recognizes the continuing requirement to competitively bid any request for service that is not part of an existing contract.

Appendix H Senate Resolution

1	State of Arkansas
2	86th General Assembly
3	Regular Session, 2007 SR 30
4	
5	By: Senator Bookout
6	
7	
8	SENATE RESOLUTION
9	REQUESTING AN INTERIM STUDY ON EXPANDING AND
10	CONSOLIDATING THE EXISTING TELEHEALTH NETWORKS IN
11	THE STATE.
12	
13	Subtitle
14	REQUESTING AN INTERIM STUDY ON EXPANDING
15	AND CONSOLIDATING THE EXISTING
16	TELEHEALTH NETWORKS IN THE STATE.
17	
18	
19	BE IT RESOLVED BY THE SENATE OF THE EIGHTY-SIXTH GENERAL ASSEMBLY OF THE
20	STATE OF ARKANSAS:
21	
22	THAT the Senate Committee on Transportation, Technology and Legislative
23	Affairs and the House Committee on Advanced Communications and Information
24	Technology are requested to conduct an interim study on expanding and
25	consolidating the existing telehealth networks in the state.
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35	
36	



03-26-2007 13:11 JDF291